SK 39
.A73
Copy 1

ing Shooting

For the Novice and the Expert

By

Chas Askins

Recreation Library

Published by **Outers' Recreation**
500 North Dearborn St.
Chicago, Ill.

Book №6

Price 50¢

The Recreation Outdoor Library

Book 1—"Fishing Facts"
By SHERIDAN R. JONES
(Published February 15, 1923)

Book 2—"Bait Casting"
By SHERIDAN R. JONES
(Published March 15, 1923)

Book 3—"Fly Casting"
By SHERIDAN R. JONES
(Published April 15, 1923)

Book 4—"Motor Camping"
(Temporarily Withdrawn from Publication)

Book 5—"The Camper's Manual"
By HORACE KEPHART
(Published June 1, 1923)

Book 6—"Wing Shooting"
By CHARLES ASKINS
(Published June 8, 1923)

Book 7—"Big Game Hunting"
By MAJ. TOWNSEND WHELEN
(Published June 15, 1923)

Book 8—"Gun and Rifle Facts"
By CAPT. E. C. CROSSMAN
(Published June 22, 1923)

50¢ EACH

ORDER FROM
Your Sporting Goods Dealer
OR FROM
OUTERS'-RECREATION
500 N. Dearborn St., CHICAGO, ILL.

OUTERS'-RECREATION OUTDOOR LIBRARY

WING SHOOTING

By

CAPT. CHARLES ASKINS

CHICAGO, ILLINOIS
THE OUTERS' BOOK COMPANY
500 NORTH DEARBORN ST.

SK39
.A73

Copyright, 1923
by
THE OUTERS' BOOK COMPANY
All rights reserved

© C1 A757640

SEP 22 1923

To

FRED KIMBLE,

the greatest wingshot that
America ever produced

FOREWORD

THIS book is necessarily short, while the subject is long, for it includes all branches of wingshooting except from the trap. At best a man can get no more than good hints from a book, and whether these benefit him or not depends on his ability to put into practice what the author preaches. The only way to learn to shoot is to shoot, profiting by misses no less than by hits. The very best teacher of wingshooting is plenty of game to shoot at, and rare indeed is the man who fails to acquire skill when opportunities to practice are ample. As any man who has shot at the traps knows, an expert and friendly coach who will stand beside us and point out errors is by far the best teacher, but all of us cannot be so blessed in field shooting, but like the English in the late war will have to "muddle through" to final success.

In the matter of guns and patterns for one kind of shooting and another, this book should prevent vital errors. Seventy-five per cent of the youngsters who take up wingshooting start in with a gun, a pattern, or a load not adapted to the purpose. More than likely the novice has selected a gun similar to that of some expert, entirely forgetful that time-tried skill will direct one gun and ignorance the other—learn to drive a flivver before purchasing a racing car.

The author would like to have gone far more deeply into the technical side of wingshooting, into time, concentration, shooting habit, subconscious aiming, muscle and nerve training, but after all this work is for the novice, and technicalities would be understood by the

expert only. The best we could do here was to put our young friends on the right road, and tell them to travel as far and as fast as circumstances would permit.

It might have been expected that in the simple matter of telling where to hold for any given shot that we might have given explicit instruction. Yet we know very well that the lead now taken by us on waterfowl would not have been correct when we ourselves were learning to shoot. For example our lead on a passing mallard at forty yards is not more than from one to two lengths of the fowl, depending on his obvious speed, in the old days it would have been fully double that. The lead and hold which will best serve the beginner, will not be his lead ten years from now, when he will have acquired a rapid swing and quick trigger time. Every man is a law unto himself in wingshooting, but only with experience does the law become fixed and unchangeable.

No man, not even the most expert that ever lived, ever became as good a wingshot as he would like to have been. Therefore do not become discouraged because of misses, for all men miss, and all have despaired at times. What the veteran remembers, what gives him heart, is that if he shoots poorly today he must shoot better tomorrow, and youth has a world of tomorrows ahead of him.

THE AUTHOR.

LIST OF ILLUSTRATIONS

	Page
Bagged	Frontispiece
Line of Aim	3
Line of Swing	5
Path of Flight	7
Cheekpiece	11
Monte Carlo Comb	15
Grip Measurements	17
Straight Grip	19
Stock measurements	21
Powers' Cheek Rest	21
Quail and Woodcock Pattern for Beginners	25
Quail load, twenty-eight bore	27
Ten bore duck load	29
Sweeley duck load	30
Twenty bore snipe load	31
Goose load, 40 yds	33
Super X Record shell, 60 yds	35
Super X Goose Load, 70 yds	36
Rough Snap	39
Half Snap	41
Swinging Aim	43
Size of Bird and Lead in Proportion to Distance	47
Missed	54

CONTENTS

Chapter		Page
	Foreword	iv
I	Elementary Principles	1
II	Guns and Gun Fitting	9
III	Guns for Waterfowl, Guns for Quail, Pattern Performances, Different Gauges	23
IV	Styles of Shooting, Methods of Aiming, Manner of Swing	37
V	Shooting with the Mind. Self-confidence, Shooting Habits	49
VI	Speed of Birds, Speed of Shot Charge, Theoretical Lead	59
VII	Shooting Quail, Woodcock, Grouse, Snipe	69
VIII	Shooting Ducks and Other Waterfowl	79

Bagged

WING SHOOTING

Chapter I

ELEMENTARY PRINCIPLES

IN wing-shooting a moving object is shot at with a moving gun.

Except when being carried along the path of flight, as in passing birds, the gun is invariably rising to the point of aim.

Barring the straight-away bird which maintains a direct line, neither rising nor falling, a still gun cannot be held upon a moving mark. On the contrary, the gun maintains its aim on the mark automatically, provided gun and object change angles at the same rate.

The path of flight is the course the bird has passed over when flying. The path of flight is never a straight line though it may appear so.

The line of aim is a straight line from eye to front sight thence extending. In shotgun shooting the eye may be focussed on a mark to one side or the other or above the line of aim. The line of aim changes with the moving of the gun; the line of focus and the focus changes only with the movement of the mark.

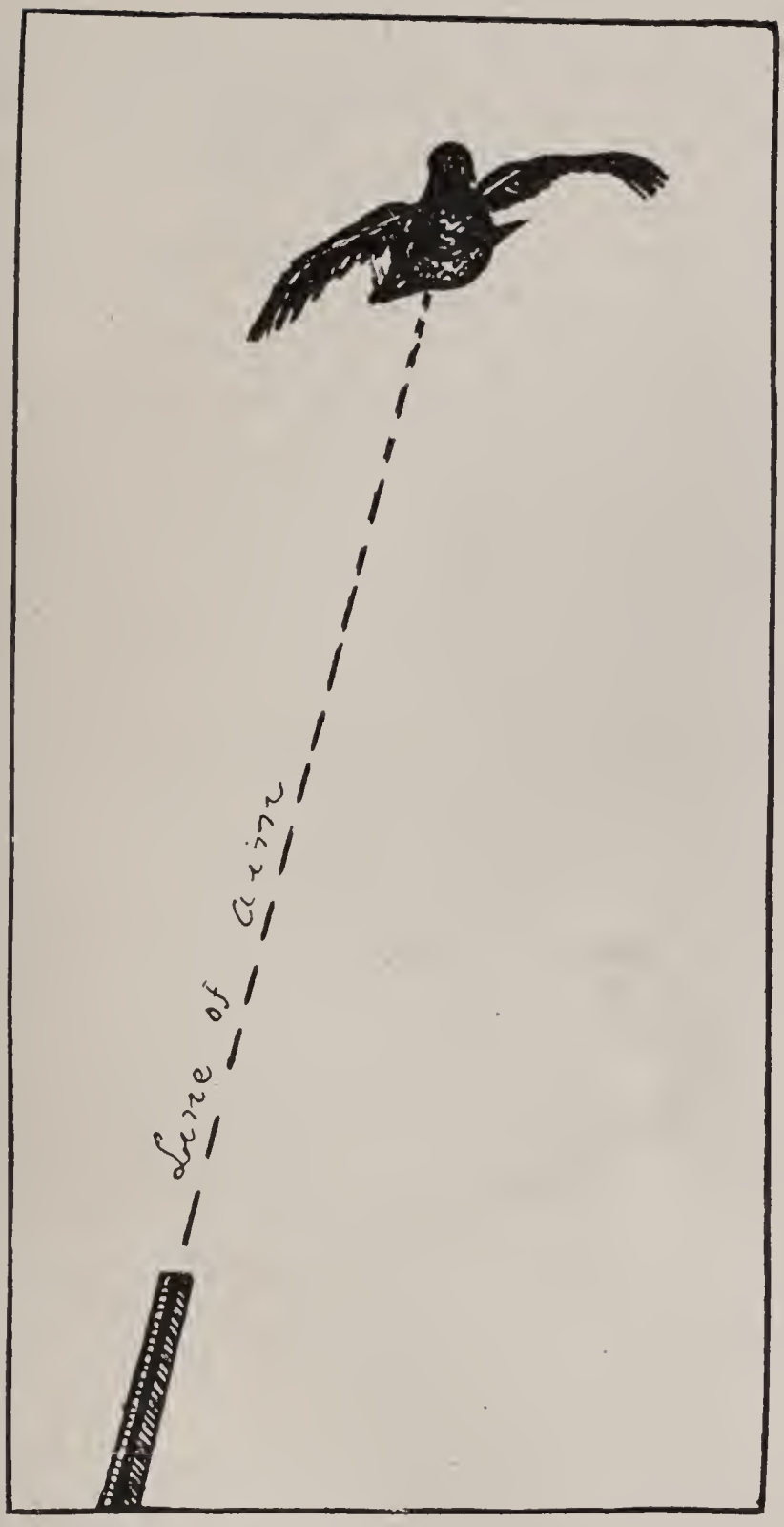
Except as to straight-away birds, neither rising nor falling, or at a stationary mark, the gun is never aimed directly at the object to be struck. The charge must be so directed as to intercept the mark, and this neces-

sitates lead. Lead, then, is the distance we hold ahead or above or below in order that shot charge and bird shall reach a given point at the same time. Lead above or beneath is frequently called an allowance.

The speed of a shot charge is known or should be, and should never vary. This will be taken up later. The speed of the mark is variable, changes from kind to kind, and varies even with the same bird. The most uniform target in speed of flight is an artificial one, and hence we have higher scores on clay birds than had ever been made on living marks.

Aim may be taken with both eyes open, or with one closed or with one merely squinted. Shooting with both eyes open is called binocular aiming. Faster shooting, that is a quicker aim can be secured with both eyes open, and distances can be more accurately judged. Closing one eye is the best means of focussing on the front sight or getting a clear view of it. The man who shoots with one eye closed or with one eye partly closed, and who sees his front sight before placing it on the mark will have a clear remembrance of where he held from actually seeing where his sight was, while the man who shoots with both eyes open, not seeing his sight, merely knows where he intended to hold. Either method of aiming works about equally well, for shotgun shooting depends on many things besides what the eye does in aiming.

Time in general terms is that period which elapses from the instant the bird breaks cover until the gun is fired, or from the first movement of the piece to cover the mark until gun is discharged. Time has other meanings, as trigger time, lock time, barrel time, time that elapses from the pulling of the trigger to the emergence of shot from the muzzle, and time of shot over the course.



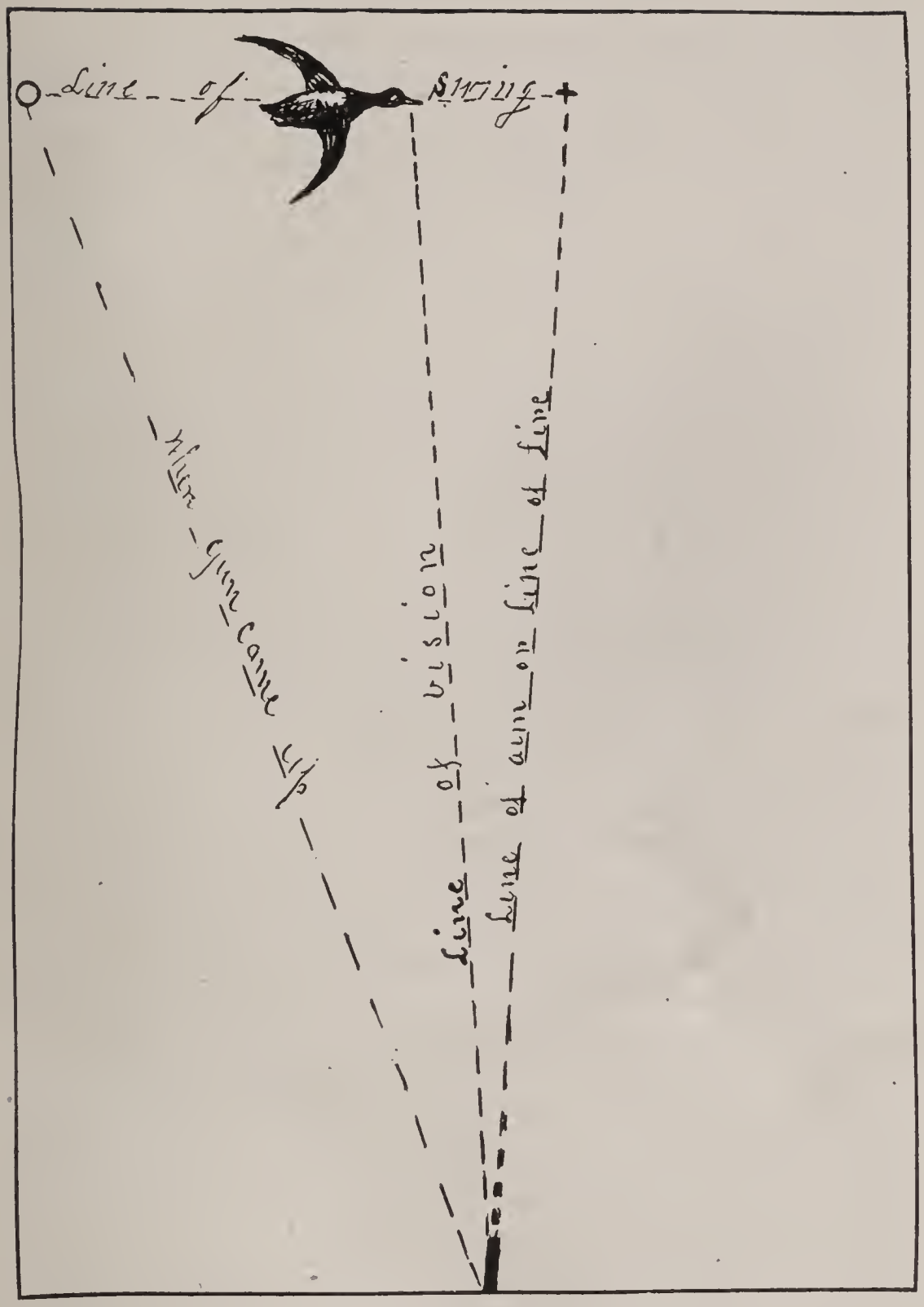
Line of aim

Style should refer to the perfection of gun and body movements, but as we shall use the term will refer mostly to the characteristic method of aiming and shooting. We will, therefore, have occasion to refer to a quick style, a deliberate style, a pottering style, a snap shot, and a swinging shot. Swing will be subdivided into deliberate and rapid.

Instead of style as embracing the perfection of gun and body movements used in shooting we will give preference to the term *form*. A man may be said to have beautiful form, graceful form, correct form, or poor form. Form is also sometimes used in a comparative sense, as the man was in poor form—meaning in poor form for him.

Position and posture. Many learn to shoot from faulty positions. So long as the position is effective this need concern only the shooter, but when learning to shoot the novice had as well acquire good and correct positions as poor ones. Practically all wing shooting is done from the standing position, though now and then the marksman may be forced to fire when kneeling or even reclining or sitting up as in a sink-box. One marksman may stand erect when shooting, while another will lean far forward. One man will place his feet pretty close together, while another has them far apart. Any position will do so long as it is easy, putting the muscles under no undue strain. Freak positions are to be avoided, for they are never natural and are made effective only through a long course of unnecessary training.

Mechanical execution includes nine-tenths of rifle shooting and one-half of shotgun shooting. The man who can invariably shoot where he knows his charge ought to go, doing this promptly, gracefully, with the least effort, has perfect mechanical execution. Except

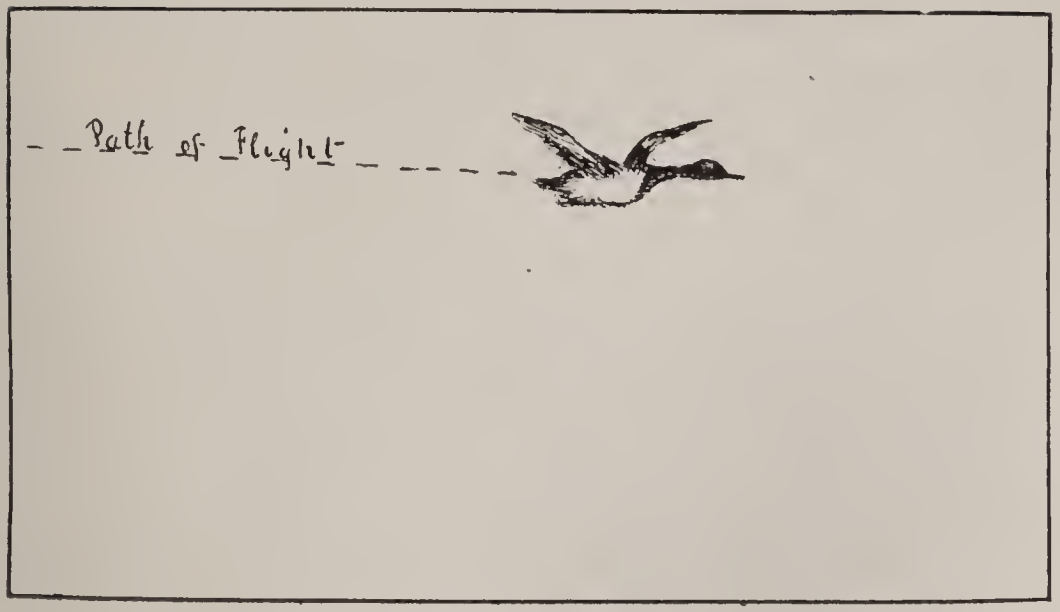


Line of swing

as to the grace and the lack of effort, our trap shots have the finest mechanical execution known. No field or marsh shot can compare with them, though it must be admitted that the live game man has far more difficulties to contend with, and his gun and body movements are more complicated because he cannot stand with piece at shoulder nor get his bird at the word *pull*.

Mechanical excellence comes from doing something in a precise way, never changing, until all processes become automatic. All movements must be practiced until they become subconsciously governed. Movements and aim are then said to be intuitive, and the shooter himself could not tell you what movements he has made, and very often cannot tell where he held. He has passed the stage of conscious mechanical effort. No man can force himself into perfect mechanical effort, neither the marksman nor any other sort of mechanic. He has to train into form by persistent repetition, slowly and deliberately at first, as the mind dictates and the eye governs, but gradually conscious effort gives place to a far superior subconscious control. Our man is now a gun juggler, a slight of hand performer, an expert who amazes us or would amaze us if he knew as well where to hold as he does how to handle his gun. If every bird could invariably be killed by a foot lead or by a two foot lead our mechanical expert would do the most wonderful things that have ever been accomplished in game shooting. Fortunately or unfortunately, as we may look at it, no man gets enough practice today to judge lead intuitively; he must constantly use judgment as to where to hold, and right there is where his mistakes and his misses come in.

In basic principle we have two methods of directing



Path of flight

a shot gun. The one might be termed intuitive aiming and the other eye-governed aiming. Rifle shooting is accomplished for the most part by means of eye-governed aiming. The marksman lines up his sights, sees the target and endeavors to bring the sights to bear long enough to press the trigger. If he cannot do this and his sights drift off, he maintains his view of the sights most distinctly and sees the target less distinctly. Some shotgun shooters do the same thing. They level the gun, see the front sight or they may have two sights, one behind the other, as a bead rear sight, and having done this bring the sight to bear on the bird. If forced to lead the mark, they keep the sights in plain view and have the bird less plainly in view. The other method is to fix the eye on the mark, seeing little if anything else. If forced to lead, the gun is brought up to one side of the bird or it is swung past the bird, but the focus of the eye does not change and the bird is always seen most distinctly and the direction of the gun is known intuitively or through

long experience in gun pointing. A man can look at a mark and shoot a foot to one side or two feet or three feet, or if he cannot do that he must learn to do so, for that is one of the things the shotgun man should be able to do.

Shotgun movements are not very complicated and should apparently be acquired with the utmost facility. They can readily be practiced when no game is present, and such drill might well be followed. Select a mark, walk toward it, stop, raise the gun, aim and pull the trigger. Vary that by walking past, aiming from one side and then the other. Change and walk away from the target, whirling on it. While the movements are simple their absolute accuracy is not simple, else the rifleman could invariably hit the center. The closing movement is a body movement, the body being poised on the feet, pivoted upon them, and swinging from side to side or up or down. A body movement is less jerky than when motion is controlled by the arms, and can better be gauged and controlled.

Chapter II

GUNS AND GUN FITTING

OF course it would be difficult to do wing shooting without a gun, though it might be done and has been attempted with a rifle. The gun should be adapted to the work in bore, fit and pattern, hence the necessity of treating this branch of wing shooting, though we propose to do so briefly.

Guns can be classified in general terms as repeating shotguns and double barrels. Repeaters, subdivided into pump guns and automatics, are widely used in America. They are the most deadly shotguns made anywhere in the world. About the ethics of using them, particularly in upland shooting, opinions would differ, and we are not prepared to handle this subject from an ethical standpoint. The United States practically has a monopoly of building repeating shotguns, though the Browning automatic is made in Belgium and a few of these are imported.

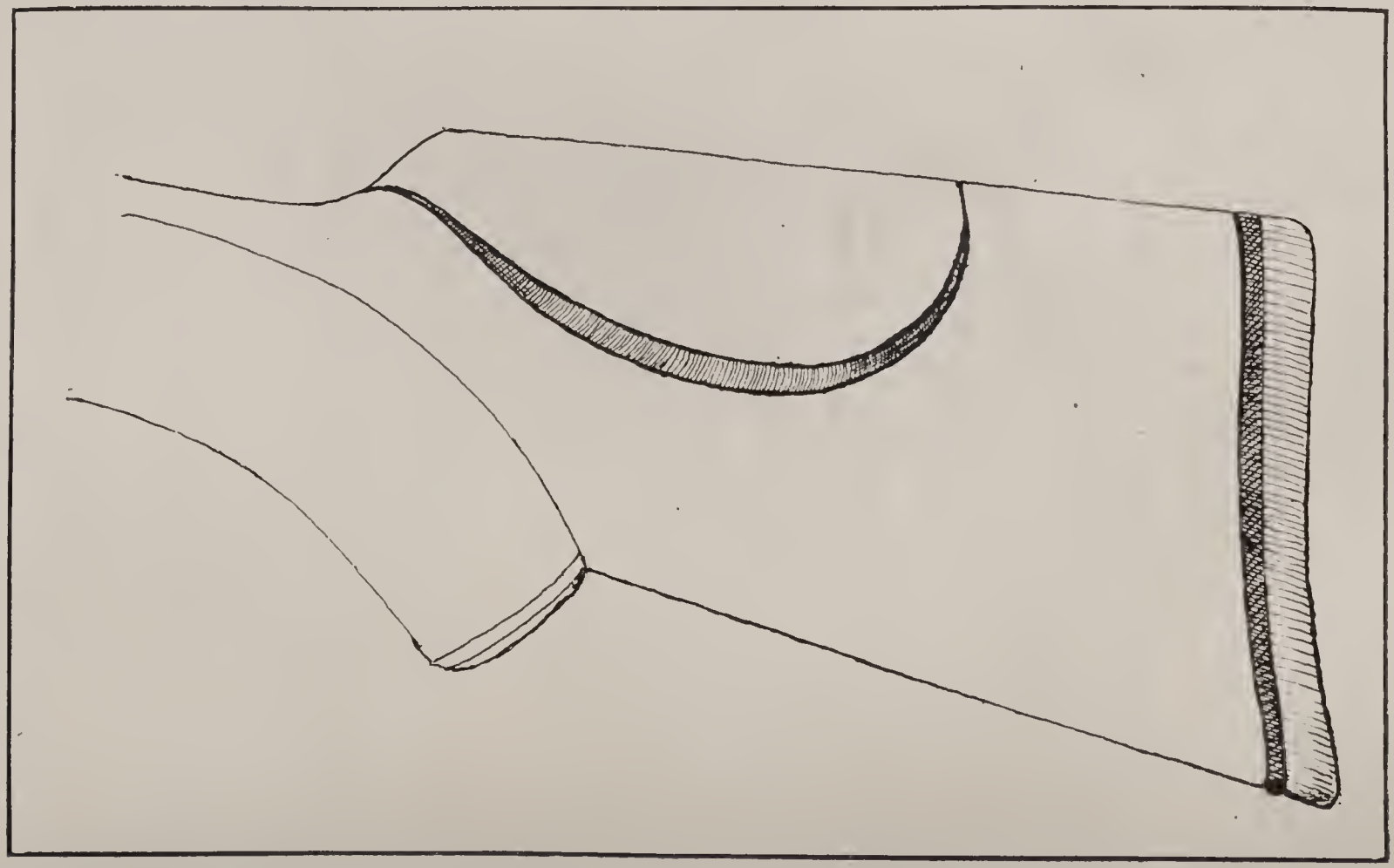
The pump repeater is only less deadly than the automatic, being nearly as fast in the hands of one accustomed to using it. Many believe that magazine shotguns larger than twenty bore should be confined to wild fowl shooting, and we are inclined to hold ourselves that no gun larger than a twenty gauge is really needed in upland shooting. More ducks by odds can be killed with an automatic than with any other gun; also more ducks will be crippled, since the reserve cartridges leads to many chances being taken. In the

uplands not enough difference will be found to warrant the increased weight of a large bore magazine arm.

Double guns would once have been divided into hammerless and hammer guns, but the arms with outside hammers are now practically obsolete. Double guns are made in all bores from twenty-eight to ten, and all have their uses and admirers. The twenty-eight gauge has its adherents, but these will always be limited in numbers, the little gun having less power than a twenty and no other advantage except a bit lighter weight and lessened recoil. It makes up into a very attractive ladies' gun, and is a very good arm for a boy to begin shooting with, since he is then not so liable to develop flinching. In full choke it will kill nicely up to thirty-five yards

The great bulk of the duck shooting is now accomplished with twelve bores and probably always will be. The twelve gauge double duck gun now handles anywhere from an ounce to an ounce and three-eighths of shot, with a killing range in the heavier guns and heaviest loads up to a full sixty yards. No smaller bore can be made to at all equal it for marsh shooting, and it is the real American duck and trap gun. Also, if there is any such a thing as an all-around gun, it is the twelve, in a moderate weight, shooting a moderate load. For quail, snipe, grouse, woodcock, and like game, however, the twelve has unnecessary power and unneeded weight.

The sixteen and twenty bores find their uses in the field, though either will kill ducks on a pinch At present these two gauges have almost the same power, each shooting an ounce of shot as the limit. The sixteen will handle more shot, however, up to an ounce and an eighth, and it seems probable that such loads will shortly appear. In that case the sixteen would



Cheekpiece

come as close as any to being an all-around gun, a large load of big shot for ducks, and a standard load for quail.

For the past five years my own upland shooting has been accomplished entirely with a twenty bore, and I cannot see that a larger gauge is needed. It will kill regularly up to forty yards, and forty yard shots are rare with quail, woodcock, grouse or snipe. The full ounce of shot which the twenty bow handles permits the gun to be opened up to an improved cylinder, which will yet throw an effective pattern up to ordinary game ranges.

The ten bore is not required for shooting ducks or other waterfowl over decoys. When the fowl come in under fifty yards the twelve is as sure of the bird as an eight bore. Nevertheless, the big ten is a fascinating weapon for pass shooting. Properly loaded, and cartridges are now being developed for it throwing an ounce and five-eighths of big shot, the ten will fool the wisest old mallard by reaching a little farther than he thinks possible. I am not aware of a greater pleasure than to stand on a shooting pass and take everything that comes under seventy-five yards. The ten gauge is the gun for the man who is ambitious to learn lead and swing beyond twelve bore limitations. On the score of sportsmanship, as compared with the repeating shotgun, the ten bore man is on safe ground.

Shotgun Refinements

Shotgun refinements might be thought to include fancy stocks, ornamental engraving, and high finish. We intend to leave all this to the taste and the pocketbook of the owner. No field or marsh gun ought to be so highly beautified as to make the owner reluctant to give it hard service. In trap guns go the limit.

We will confine ourselves here to refinements that are useful. We will, however, assert that no gun can be too highly finished on the inside, in the adjustment and polishing of bolts and locks, in the tuning of ejectors and sears, in the freeing of all working parts from undue friction, and in the joining of wood to steel and steel to steel. All such refinements mean a longer and sounder life for the arm. As to the appearance of guns, we can only add, don't buy a cheap gun if you can afford a better one.

Ejectors

We are terming ejectors a refinement, though in reality they should be considered a necessity. All our better makes of firearms, like the Fox, Smith, Ithaca, Parker, have ejectors that have been tried and tested in long and strenuous service. They work and keep working. Ejectors should be considered standard and placed on all double guns. A double gun lacking ejectors is deficient in a feature essential to perfect service.

Single Trigger

The single trigger is not an unmixed blessing when it works, which some of them do not. I am very fond of a single trigger, however. It adds to stock fit, since both barrels have the same pull and reach. It enables the shooter to keep the same grip of stock, and furthers gun balance and even accuracy of pointing. The weakness of this device is that, except with malice aforethought, the gunner cannot shift barrels. I have owned a half dozen different models of single trigger, one shifting with a Greener safety on the side of the frame, and another with a slide in place of a top safety-slide, and never had time to shift barrels after a bird

broke cover. I have used one single trigger for twelve years, and in that time the right barrel has been shot first ninety-nine times in the hundred. This is more or less a hardship when a gun is bored with one barrel cylinder and the other full choke, where now and then it would be highly desirable to shoot the full choked barrel first. I haven't any doubt but if single triggers were standard and always had been that shooters would consider two triggers a highly desirable improvement, thus giving them an instant choice of barrels. Not being willing to be bothered by trying to shift triggers, one of my guns thus fitted had both barrels bored improved cylinder, another had both barrels bored quarter choke, a third both barrels bored full choke, and a fourth one barrel quarter choke and the other three quarters.

Rubber Recoil Pads

A rubber cheek pad is worthless unless the gun was a mighty bad fit in the first place. Rubber buttplates are not needed on any quail gun unless it is a very light twelve bore. On heavily charged duck guns they are highly desirable. Coming straight back and compressing the buttplate the gun doesn't jump to the same extent as with a hard butt, bruises the cheek less and is more readily brought to bear for the second shot. Rubber buttplates are of many makes and models, all behaving pretty much alike.

Sling Straps

Sportsmen of Continental Europe are accustomed to carrying their guns by means of a sling. The idea once struck me as a good one and I tried it out. It is a fine thing to carry a gun with, to and from the shooting ground, if one travels afoot, but the cussed thing was

Monte Carlo comb

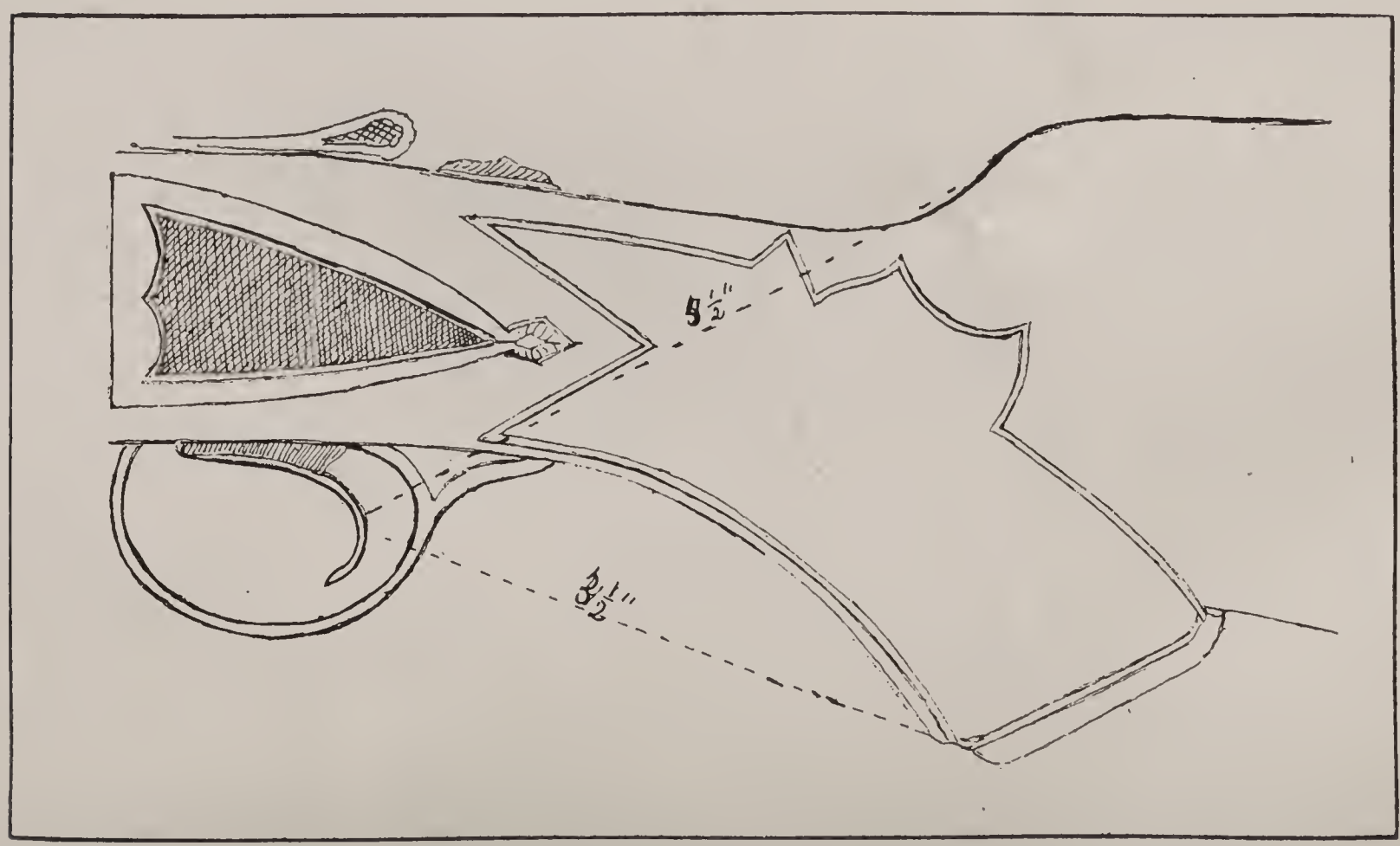
always in my way when I wanted to shoot. I discarded it.

Stock Fitting

Most of us have discovered by using a pump gun or an automatic that we can shoot a standard drop and length of stock without being much handicapped. Nevertheless we are not all built precisely alike and a man might as well have a gun built to his exact measurements if he is having it made to order and knows what he ought to have. Freakish stocks are generally a mistake, that is, stocks of extreme length, extremely straight or extremely crooked, or with great variations from comb to butt. Stocks are cut to order with two prime objects in view. One of these objects is simply to obtain a fit and the other to correct a shooting fault. Trap stocks are made very straight with the idea of enabling the marksman to automatically throw his charge high, nearly all birds rising when taken. In the same way a shooter who knows that he frequently shoots low can correct that fault by means of a stock straighter than his natural measurements.

Men are tall and lanky, fat and short, thick chested and flat chested, but I am convinced that the longest stock anybody needs is 14¾ inches, the shortest 13¾. The greatest drop really required is not more than 2¾ inches at butt, and the straightest stock should have not less than a two inch drop. Comb drops rarely if ever need to vary more than from 1¼ inches to 1⅝. In field or duck shooting, a comb drop of 1½ inches will suit half the men who shoot.

The writer has been through the whole mill, with stocks that were too crooked and stocks that were too straight. One of my guns had a three inch drop,

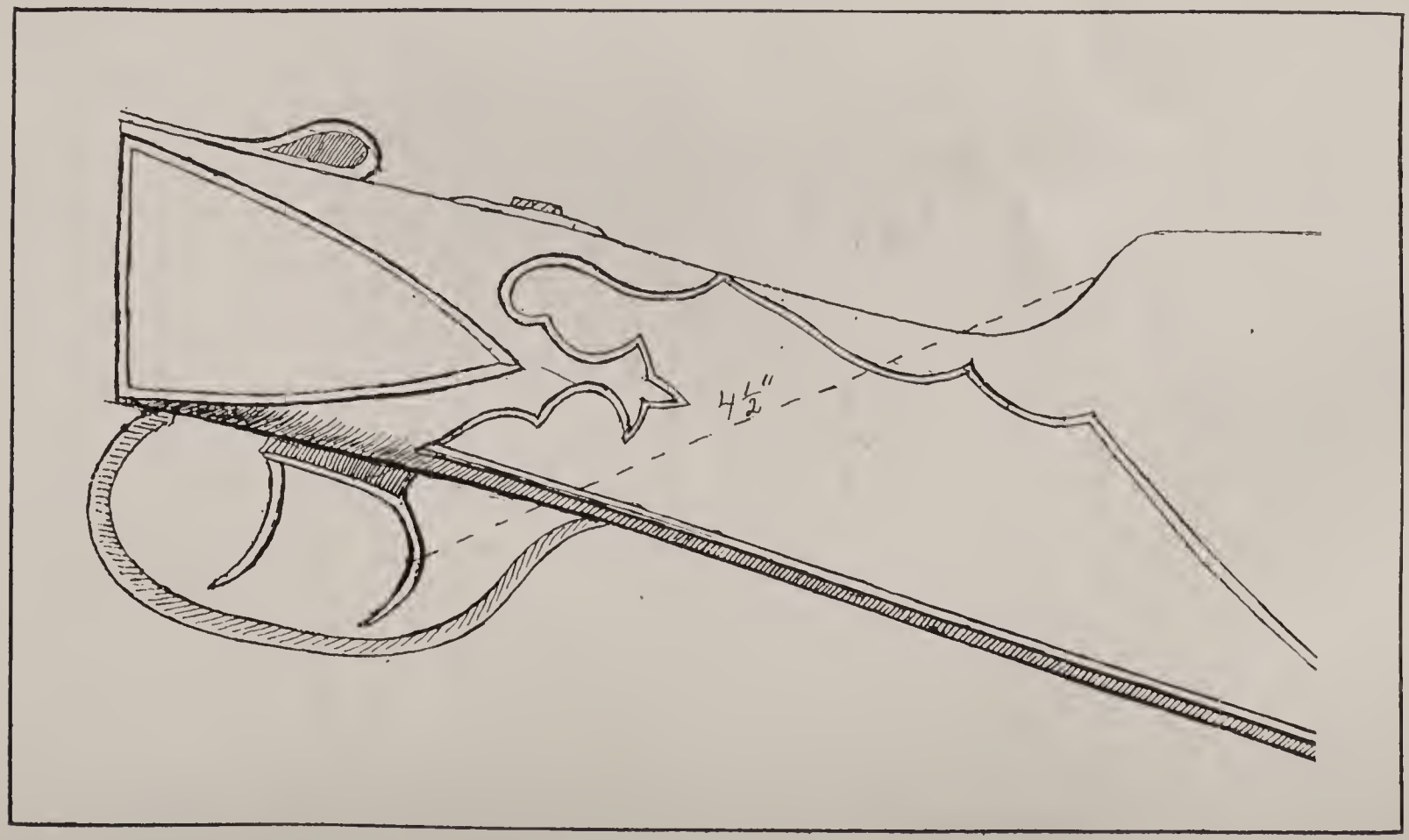


Grip measurements, Pistol grip, Fox gun

another a drop at butt of 1¾ inches, and the same at comb. That was a freak stock and taught me not to do the same thing again. Latterly I have become a bit more indifferent as to the drop at butt, but cling to a fixed drop of 1½ inches at comb. My favorite duck gun has a 2½ inch drop at butt by 1½ at comb; my favorite quail gun has a two inch drop at butt by 1½ comb. If the duck gun had a two inch drop and the quail gun two and a half I doubt if it would make much difference.

In fitting or trying a gun for fit, do not attempt to secure a drop which enables you to sight flat over the rib. The line of sight should be from an eighth to a quarter of an inch above the rib. This prevents the barrels from shading the object of aim. The line of sight should be about the same distance above the rib as would be taken when using rifle sights. When targetting the weapon at a fixed mark see that it throws the bulk of the charge above the point aimed at. The idea is to center the bird when he is still in plain view and not to fully cover him. It will be found, too, that the average man shoots a trifle lower at birds awing than he does at a stationary target. My guns throw the bulk of the charge above the point of aim when shooting at a still mark, and yet more of my misses fall under the bird than elsewhere. Barring trap shots, who, I think, go to the opposite extreme, most men are misfitted by having a stock that has too much drop.

Stocks are measured in length from the front trigger of a two trigger gun to center of butt. Such measurements usually run from 14 to 14¼ inches. Boys, women, and an occasional man may require a stock shorter than fourteen inches. Of course it is a fact that any man can handle a stock that is too short, as witness that every soldier has to adapt himself to the

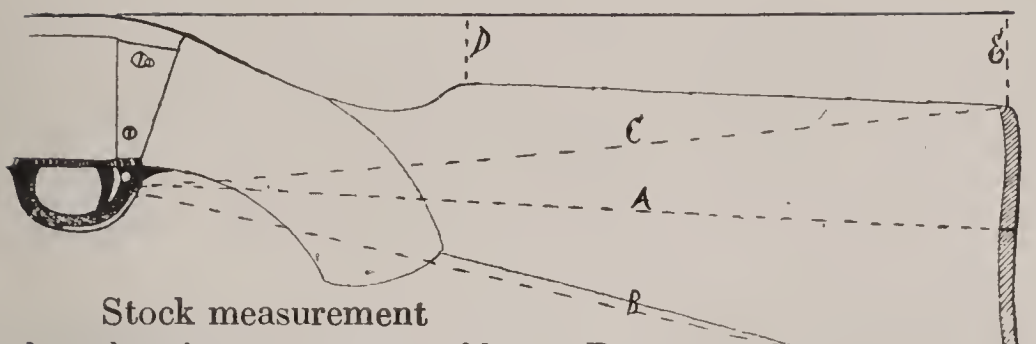


Ithaca straight grip, 4½ inches long, 4½ inches in circumference

abbreviated Springfield, yet a long stock is less punishing and it leads to more accurate gun pointing. Use as long a stock as possible and not be balked when in full clothing, or when assuming unnatural and cramped positions, frequently necessary in duck shooting. In the end a man will find his correct measurements, and these may be modified by shooting habits. The quick shot needs a straight stock, which may slow him up a little, and will automatically throw his charge on the mark when an impatient finger lets-off too promptly.

A single trigger gun, trigger in the rear position, and measured from this trigger will usually have a stock about three-eighths of an inch shorter than the same fit of gun when stock is measured from the front trigger. It is to be noted that there is ordinarily an inch difference between the front and the back trigger but if all this difference is contained in the single trigger stock it will feel short. The trigger in the rear position means that the hand grips the stock farther back, and hence a longer stock may be used. However, keep in mind that though customarily shooting a stock fourteen and a half inches long when measured from the front trigger you don't want to order a single trigger arm with any such stock measurements, taken from trigger in the rear position. Most men prefer a single trigger in the rear position, a few in the middle position, and practically none in the front position.

The grip is almost as important as the stock measurements, if the gun is to be used comfortably. Grips to fit a hand of ordinary dimensions should be not less than four and a half inches in circumference. Straight grips should be a trifle larger, the hand having less support to the rear. Gunmakers have a way of making twelve gauge grips of nominal dimensions but each gauge smaller has a lighter grip, forgetting that the same hand



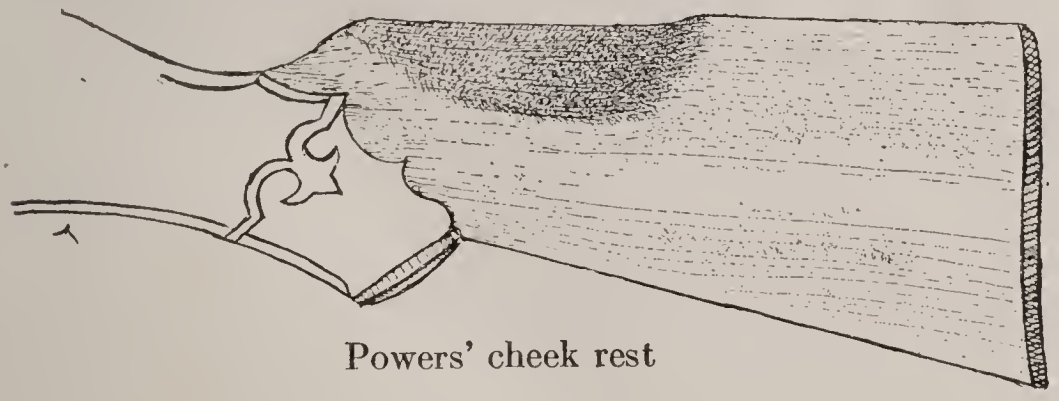
Stock measurement

A, length, trigger to center of butt; B, length, trigger to toe; C, length, trigger to heel; D, drop at comb; E, drop at heel. Length from trigger to heel, as compared with distance from trigger to toe gives the pitc

may hold either gun. The small grip looks racy, but it sacrifices utility.

Pistol grips are measured in length from the center of rear trigger to the front curve of the bottom of grip, and from the same point on trigger to the top of cone rise. Average measurements will run about 3½ inches for lower measurement by 4½ for the upper.

Straight or pistol grips matter little, for the gunner can become accustomed to either in half a day. Straight grips are supposed to be faster in two trigger guns because the hand can shift more readily from right barrel to left. However, if the marksman follows the scheme that has always appealed to me of shooting the left barrel first, this reasoning will not hold. I think it was Bogardus who claimed that the left barrel should be fired first because the gun then drives



Powers' cheek rest

back through the hand and the right trigger is then more easily and quickly reached than would be true of the left when first pull was reversed. Straight grips are measured from center of trigger to top of cone rise, which should be rather abrupt and high enough to well support the ball of the thumb.

Cast-offs and Monte Carlo combs are more or less a humbug. A few people with broad shoulders and a broad face might be benefited by a slight cast-off, not more than three-eighths of an inch. The Monte Carlo comb is supposed to give the same line of elevation whether stock is cheeked at one point or another. As a matter of fact it doesn't do that because the stock thickens toward the rear, and either the horizontal or the vertical line will be off unless a man's cheek is placed uniformly. At best this comb is more liable to bruise the cheek than any normal stock.

A cheek piece is of more use than any Monte Carlo comb, being very comfortable and not having any faults. What I like better, though, is to cut the cheek piece into the stock, Chan Powers fashion. The stock is built with a rather high and thick trap comb. This is then cut into and hollowed out, making a snug and precise resting place for the cheek. Compared with the slant of the comb the Powers' cheek rest is deepened a bit as it extends backward, being thus the contrary of the Monte Carlo comb. It is made to blend into the wood and has no abrupt curves. I have long made it a practice to cut this kind of a cheek piece, but the plan originated with Mr. Powers.

Chapter III

GAUGES

GUNS FOR WATERFOWL. GUNS FOR QUAIL. PATTERN PERFORMANCES, DIFFERENT

IN THE ordinary course of human events it often so happens that a man begins to learn to shoot with the gun he ought to have as a graduating arm, and he finishes up with the arm he should have started with. The novice usually has a natural ambition to possess a fine shooting gun, one of the long range affairs, and he generally gets it. What he really needs is a gun that balances his skill, and unless he is a freak of nature he hasn't any skill. This would make it appear logical that he doesn't need any gun at all, but I didn't quite mean that. What he needs is the widest scatter gun that was ever turned out, whatever that may be.

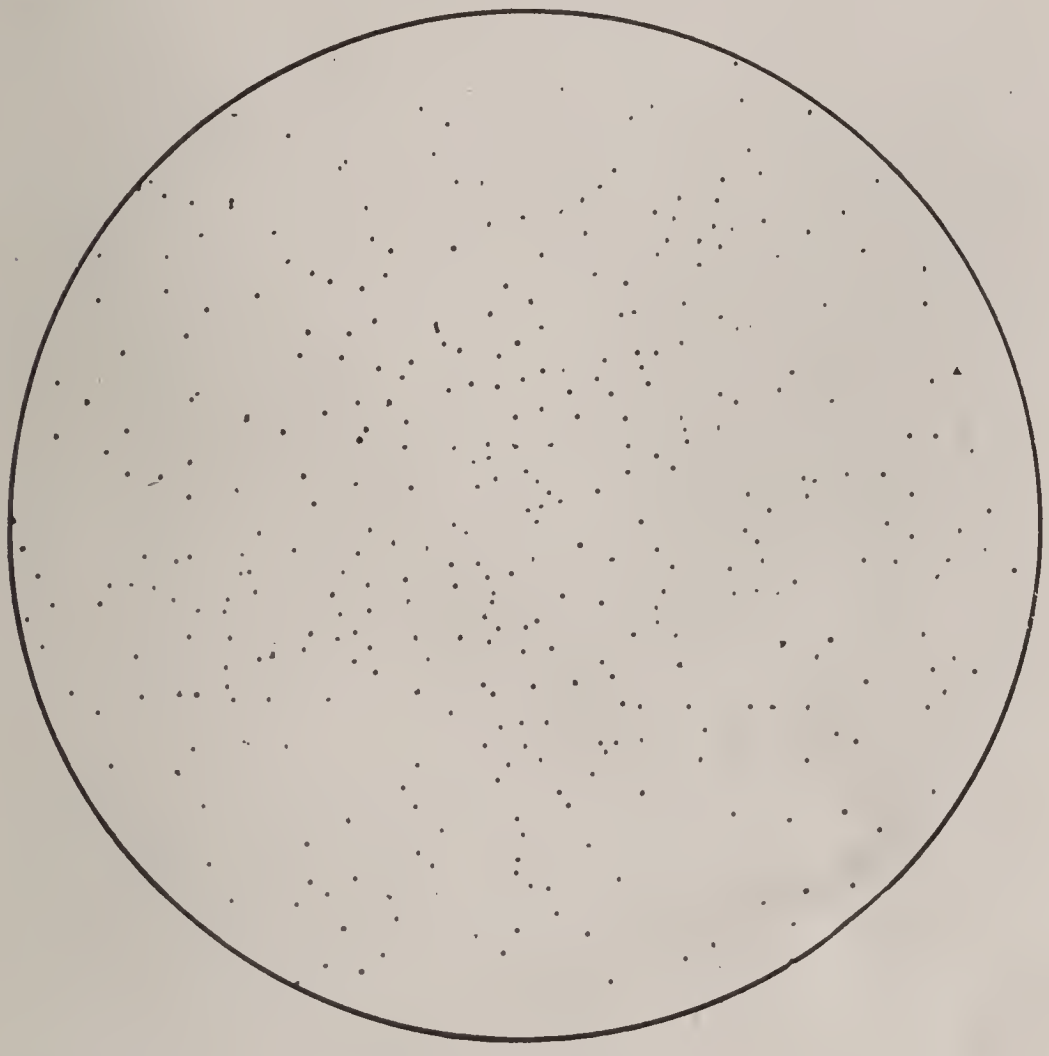
Whatever a man's skill in holding or his lack of skill, it is theoretically possible to furnish him with a gun he can hit with. Maybe he can't gauge a flight, make a lead, and point his piece closer than two feet of the mark at twenty yards; all right, give him a gun with a four-foot spread, and if that is not enough, a five-foot spread or a six-foot. Give him a gun he can hit with, and he will get birds right from the beginning. Of course his range will be restricted, but it will be anyhow from not knowing lead and not knowing much of anything else. What he emphatically ought to have is a gun he can hit with, for it is an old and true saying, though trite, that hitting leads to hitting and missing to missing.

If our beginner is fifteen years old or more, that is if he has a man's strength, his first gun had better be a light twelve bore, one weighing about seven pounds. We are speaking now of quail guns particularly, but the gun will do for all work the first year or two. Have this piece a full cylinder, not modified or improved cylinder or improved anything. A full cylinder ten bore would be better, but such a gun would have to be thrown away later on, and the twelve may be perfectly satisfactory on quail, grouse, and woodcock for years to come. Have the gun fill up a thirty-inch circle at twenty yards, wider than that if it is possible for the gun maker to turn out an arm of more spread. The range should be confined to thirty yards and under; load with light charges of powder but the full amount of shot, say an ounce and a quarter of number nine shot for quail or woodcock, and seven and a half for ruffed grouse, with sevens for ducks. There is no need of a high velocity load where the game must be taken at short range, but the longer the column of shot the greater the spread in a cylinder gun, and spread is what we are looking for—spread and density with a bell-muzzled gun, if we could have what we need.

After graduating with the full cylinder twelve bore, bagging perhaps seventy per cent on quail and fifty per cent on grouse, the time has come for a real grouse and quail gun. I have never seen the necessity for carrying a heavy arm or shooting a heavy load at such game as quail, woodcock, snipe, ruffed grouse or any other upland game unless it is chickens. A sixteen bore weighing six and a half pounds or a twenty of six to six and a quarter pounds will be heavy enough.

In present day loads the shells for one of these gauges or the other may contain exactly the same load, one ounce of shot, driven at a velocity of around 850 to

900 feet second. Higher velocity than that is not required from an upland gun, the increased powder charge merely adds to kick and discomfort without being any more deadly up to average quail range. The sixteen or twenty bore may have an improved cylinder



Quail and woodcock pattern for beginner. Thirty inch circle, 20 yards, No. 9 shot. Taken from an actual pattern at the distance

right and a quarter choked left, or it may be bored fifty per cent right and sixty left. It is only when a twenty or sixteen gauge is to see all round use that it needs a closer than a sixty per cent barrel.

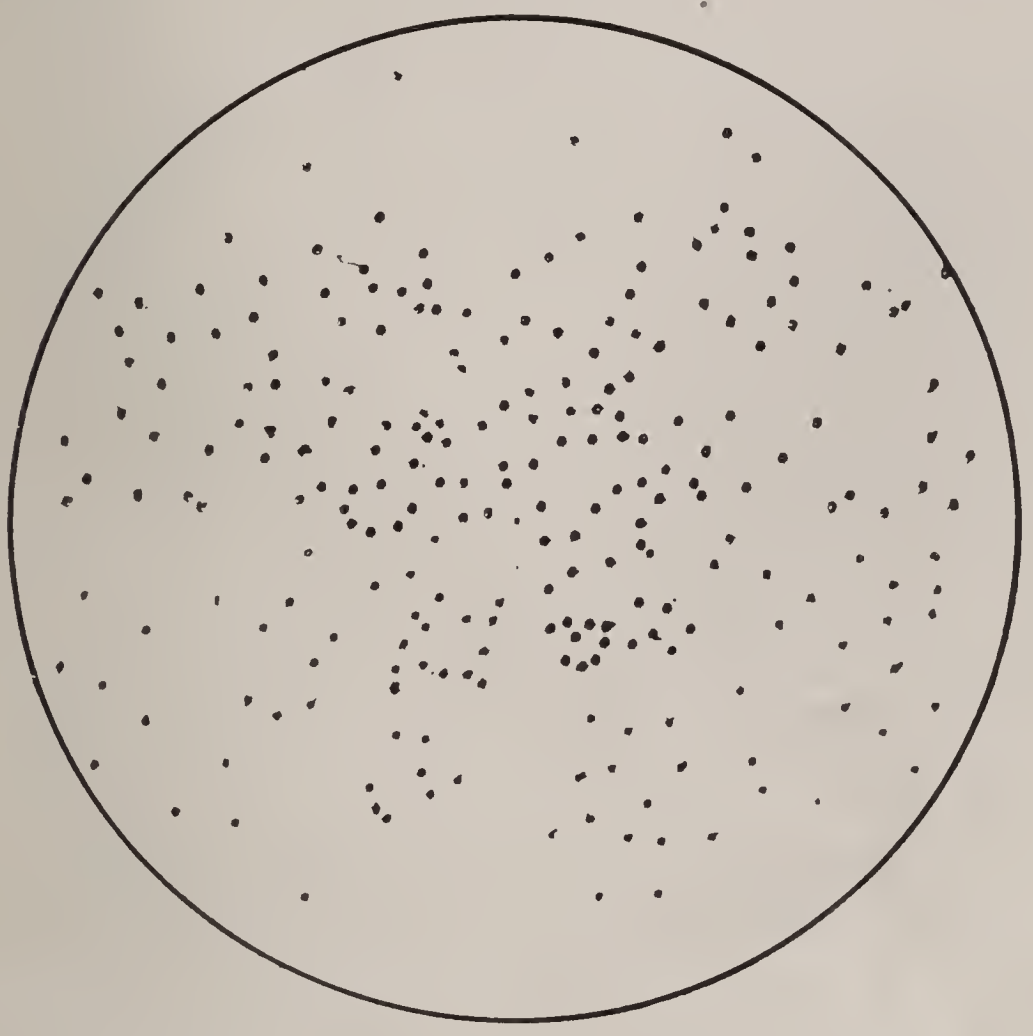
None of us can probably do better than to base his

advice on his own personal experience. The writer has three strictly quail guns, though they would be equally well adapted to woodcock, and grouse, and one of them to snipe—able, too, to do a pretty good job on ducks. The first is a sixteen gauge, both barrels bored improved cylinder, weight of arm seven pounds, single trigger. Either barrel covers a full twenty-four inch circle at twenty yards; anybody who can shoot at all can kill quail with this gun. Another deadly arm is a pump twenty, with cylinder barrel covering a twenty-six inch circle at twenty yards. It is a short range arm, but if handled fast and the birds get up right is altogether too deadly. A third gun is a twenty double barrel, weight six and one-half pounds, twenty-eight inch barrels, one bored fifty-five per cent choke and the other sixty-five per cent. This is a favorite arm, thoroughly satisfactory except in the brush, where nevertheless it is good enough. Quail ought to have some sort of sanctuary anyhow. The right barrel covers a twenty-two inch circle at twenty yards, the left sixteen or eighteen inch.

The sort of gun last described is not for the tyro, and the boy who is started with it will more than likely give up shooting, discouraged. The expert shot, having due ambition and due regard for the game ought to use some such gun. However, I have yet to see the man who could put up a creditable performance on quail, cock or grouse with a full choked gun, no matter what the gauge. I have seen shooters who had an idea that they could wait out the bird and take him when he got far enough away, but all that kind of thing is essentially pottering, and a big percentage of the birds escaped unshot at.

Most men use shot that are too large, speaking of quail and snipe or woodcock. This is probably more the fault of the cartridge companies than of the

shooters. Seven and a half seem to be favored by the cartridge makers, and about nine times in ten if the dealer has any cartridges at all they will be this size. For all small bore and open bored guns eights are better, and for some shooting nines are better than eights.



Twenty-eight bore, ¾ ounce number 8 shot, twenty-five yards, thirty inch circle, modified choke

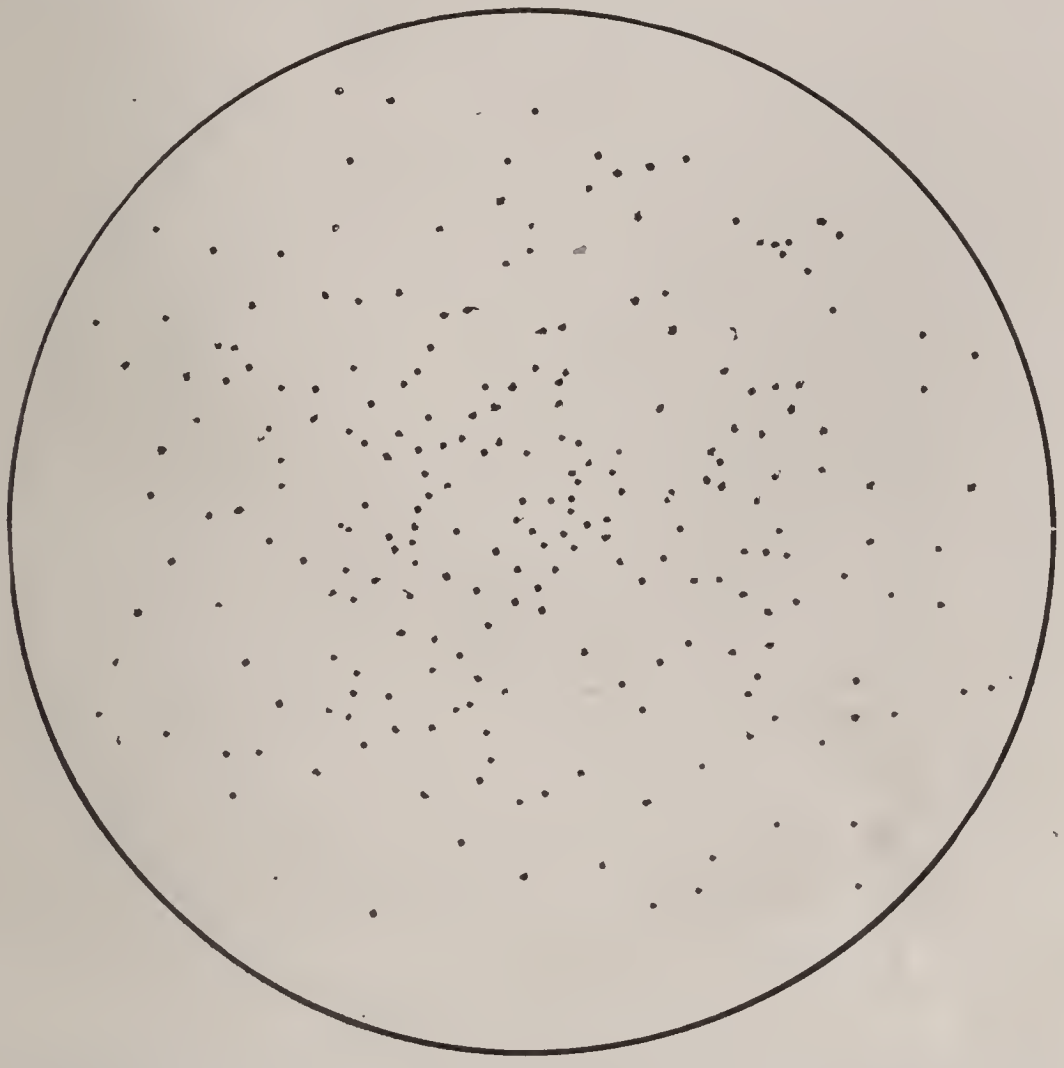
Some years ago we were able to get eight and one-half shot which were dandies on quail and snipe. Some of the lead companies still make a small eight, running about 450 to the ounce, and these I like better than standard shot of 400 to the ounce, particularly in guns smaller than twelve.

If we could have a gun for every purpose, woodcock would demand a bit opener shooting weapon than quail, and snipe a closer pattern. Woodcock are often shot within fifty feet, and they are a delicate bird, easily killed and readily mutilated. Grouse are often taken at close range, too, but again long shots are afforded and two barrels, one improved cylinder and the other three-quarters choke are about right. Snipe are often shot at short range, when they are lazy, on sunny days, but at other times the range may be anywhere up to fifty yards. The snipe gun should then be a denser patterning weapon than a quail gun, say one barrel quarter choke and the other full, if a small bore.

Gunmakers differ about what they term their variations in choke, and also concerning the patterns to be expected. None of them will build a full cylinder from choice, for such an arm is difficult to bore and get a round and even pattern. A full cylinder shoots a pattern of anywhere from thirty to forty per cent. An improved cylinder has just choke enough to be easy to bore, a choke of some five thousandths of an inch constriction as a rule. This degree of choke is very popular and deservedly so. It shoots into a twenty-four or twenty-five inch circle, depending on the cartridge, and patterns about forty-five per cent. A quarter choke is a fifty to fifty-five per cent gun, a modified choke a sixty per cent, and a three-quarters choke, is a sixty-five per cent, shooting up to seventy with a fitted cartridge and a full choke shoots from seventy to seventy-five per cent. Most factories, unless otherwise instructed bore their guns improved cylinder, modified, and full choke. Usually, in guns placed in stock, the boring will run in pairs—modified and full, improved cylinder and modified choke.

Wild fowl guns are an altogether different story, though many true duck guns are found in all-round

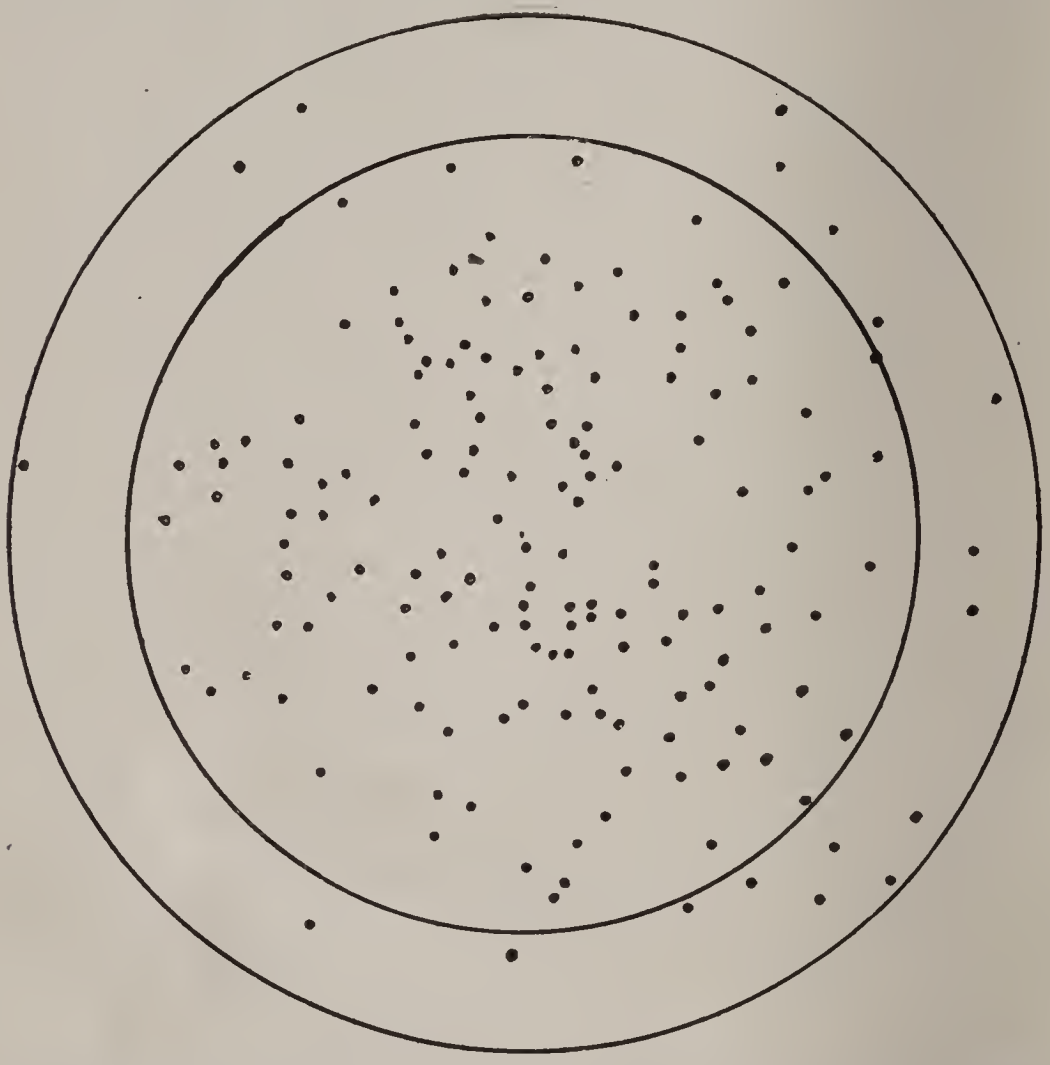
use. I would personally make the division between upland guns and duck guns pretty sharp, not only as to cartridge and bore but as to weight. First a word as to the all-round gun, the gun for the man who expects to own but one and means to get all the service



Ten bore Ithaca, 1½ ounces number 6 shot, thirty inch circle, 40 yards

possible out of it. This arm should perhaps be a twelve gauge, weighing from seven to seven and a quarter pounds, twenty-eight to thirty inch barrels, chambered for two and five-eighths inch cartridge, load not to exceed three and a quarter drams and an ounce and an eighth, with a general preference for

three drams of powder, and choked right improved cylinder and left full. Like any other jack of all trades this gun can do anything pretty well and nothing exceedingly well. It is too heavy for quail and too light for ducks; one barrel shoots too close for quail



Duck load, 43 grains No. 93 powder, 1¼ ounces of No. 4 shot, Sweeley load, shot jacketed. In the 24 inch circle 146, in the 30 inch 165, 95%. Only an expert shot could use this load.

and the other is too open for the fowl. It is a makeshift arm, but I have seen some men make a darn good shift with it on all kinds of game and even at the trap.

The quail gun we have been talking about, a sixteen, twenty or featherweight twelve, even a twenty-eight

bore is used sometimes, weights should not exceed six and three-fourths pounds, and one ounce of shot is enough. Duck guns should be either ten or twelve bore. The ten bore is not used very much, but it is a real duck gun for al' that. Not much prejudice

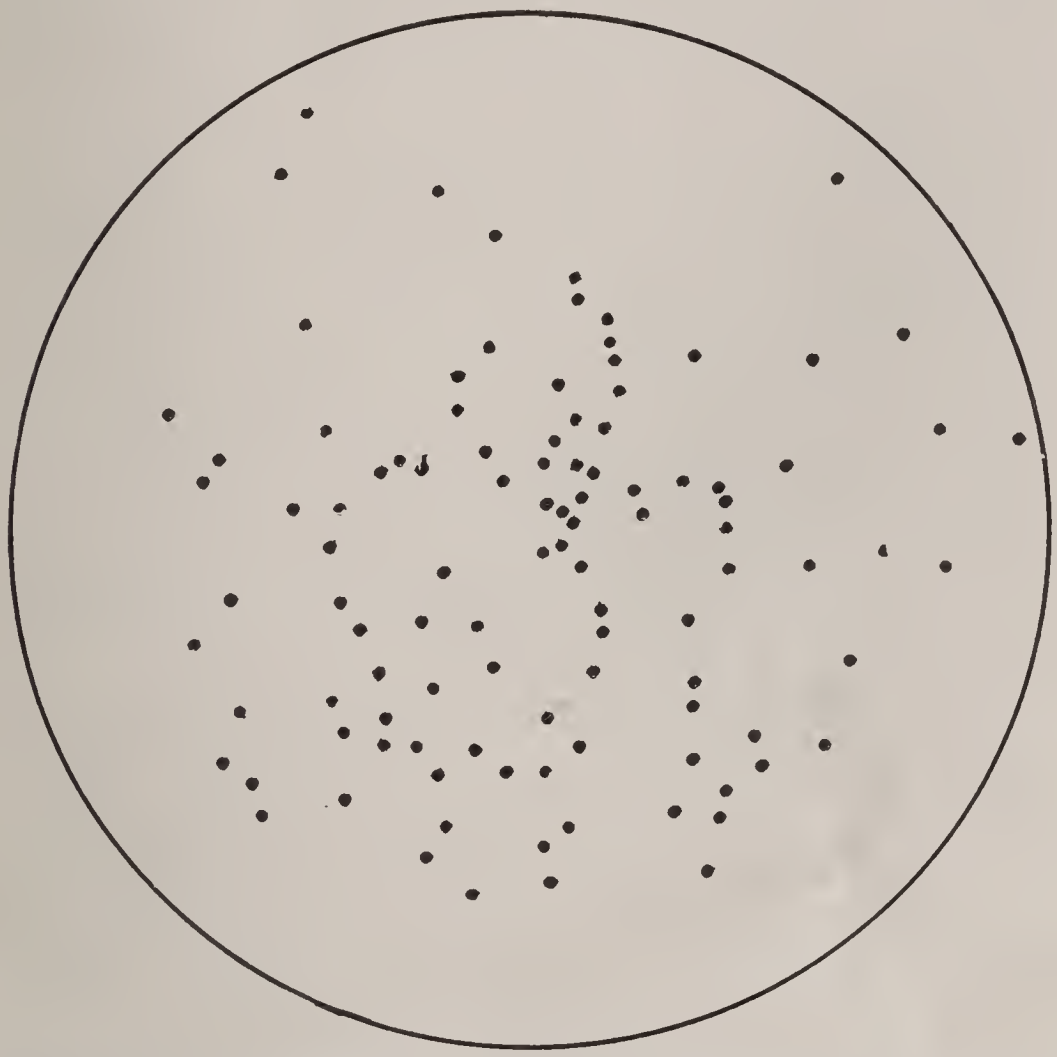
Twenty bore, thirty inch circle, 40 yards, one ounce of small eights, full choked gun

against the ten bore exists among gunners apparently, but they have not been able to get any better work out of the ten than they have from the twelve, hence could not see the horse sense in carrying extra weight of wood and iron. This state of things was neither the fault of the shooters nor the gunmakers. Gun

factories are willing and always have been willing to build any weight of ten bore desired, in any length of barrels. Since the heaviest load of shot obtainable was a twelve bore charge of an ounce and a quarter, the big gun had little or no advantage of a twelve and was properly disregarded. Shells have lately been developed for the ten bore, however, containing an ounce and five-eighths of shot, patterning eighty per cent with this charge. Such a gun is not to be equalled by any twelve bore that has ever been made or ever will be made; so for certain ducking purposes, as in pass shooting or in sea shooting from a battery a good ten bore of a weight of ten pounds or more, with barrels of thirty-two to thirty-four inches has no peer in gauges smaller. Larger than standard loads could be made up using our bulk or dense powders, but for such loads as that given above progressive burning powders are required.

I have lately been experimenting with these big loads in an eleven pound Ithaca. Patterns ranged from a hundred and sixty-six number four shot to two hundred, the average being about a hundred and eighty-four or eighty per cent. The loads contained forty-eight grains of number ninety-three and one and five-eighths or two hundred and thirty pellets, and with Du Pont De Luxe forty-six grains and the same shot load. Pressures with the number ninety-three ran under four tons and velocities averaged 1,018 feet second. This velocity is materially higher than has been obtained with standard loads of an ounce and an eighth, and is a full sixty feet higher than is afforded by three and a half drams and an ounce and a quarter in twelve bores. With such a load one of the big guns ought to kill single ducks up to seventy-five yards. It is the arm for the man who is ambitious to test his skill and knowledge against the flight speed of fowl at long range.

A gun of wider usefulness than the ten is a twelve bore, chambered for three inch cases, weight about eight and a half pounds, using at present the Super X shell with a load of 1⅜ ounces of shot. These guns are an altogether different weapon from the standard



Goose load, special heavy Fox gun, and No. 2 shot, pellets in load 111, in the 30 inch circle 105; forty yards, De Luxe powder, shot mold

twelve, pattern up to eighty-five percent and are deadly on fowl at sixty yards or better. The twelve of this description is no longer a forty yard gun or a fifty yard, but will kill very often up to seventy. Specially bored for three inch cases it is not well adapted to shorter shells, which confines the arm pretty much to wild

fowl, geese and ducks. For duck shooting most men would prefer it to a ten bore since it handles faster, and the marksman is less disturbed in his time and swing. The big load it carries has no dangerous pressure, the average of ten shots as given by the Western Cartridge Company having a pressure of 4.55 tons. The velocity runs between 1005 and 1020 feet second.

An almost equally effective duck gun is one chambered for a 2¾ inch case, shooting regular Super X shells of this length and other heavy loads. Such an arm should weigh about eight pounds. This weapon has an effective range little shorter than the three inch chambered duck gun, patterning an equally high percentage, but throwing only an ounce and a quarter of shot. For shooting over decoys, on inland waters, we would prefer this gun to either the ten bore or the heavier twelve. The arm should be lighter, the recoil is less, and the range up to all requirements when decoys are used.

It is a matter of common knowledge that the standard twelve with standard ammunition does very well on ducks. Up to fifty yards it is good enough to account for its bird about as well as the more powerful arms. Arms for standard bulk and dense powder cartridges usually weigh between seven and eight pounds. Super X shells can be shot in them to advantage if a heavy load is required, and they also handle other ounce and a quarter loads, but many are better fitted and shoot better with an ounce and an eighth of shot.

In closing this chapter we will mention the fowling pieces in most common use—those that kill more ducks than all the double guns combined—pump-action repeating shotguns and automatics. Everybody knows all about a Winchester pump or a Remington automatic. They shoot as well as any guns handling like

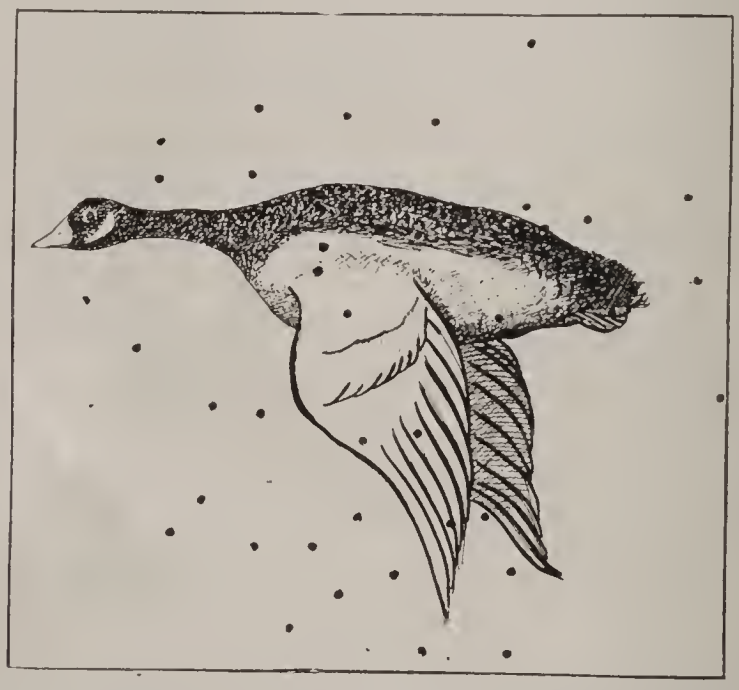
cartridges, repeat rapidly enough so that the gun can be emptied on a flock that comes in, and they certainly kill ducks. There is something fascinating about killing two ducks every time the watch ticks, and keeping it up until six birds are down. The writer

Super X Record, duck load containing 1⅜ ounces No. 4 shot, thirty inch circle, distance 60 yards

once killed eight ducks out of a flock—all killed in the air, and has seen two guns account for a dozen birds more than once.

Repeating shotguns are an American invention and seem to suit the American tendency to get what we start after. In trained hands the pump is about as

effective as the automatic. My own opinion is that these magazine arms do not lead to as accurate holding as does the double barrel. The tendency is to depend on rapidity of fire rather than good holding, whereupon if one shot misses maybe the next one or the third will not. Personally, I should like to see automatics and pump guns confined to three shells, two in the magazine. Sixteen and twenty bores are used for duck shooting but are not equal to a good twelve.



Super X, No. 2 shot, Lewis gun, distance 70 yards, pattern in 30 inch 37, 34 percent

Chapter IV

STYLES, METHOD OF AIMING, MANNER OF SWING

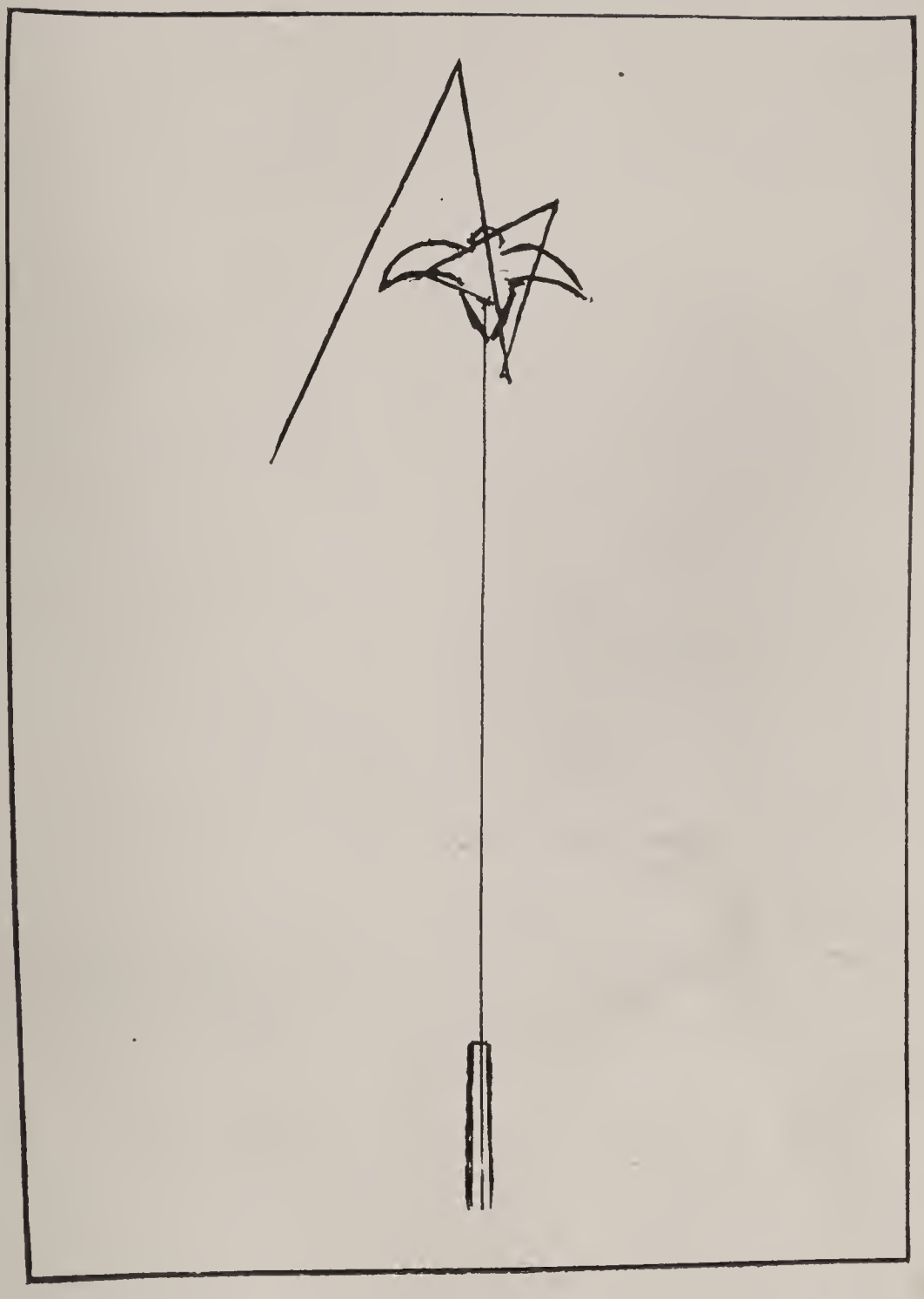
ANYBODY who knows anything about wing-shooting at all, who has tried it or who has been told anything about it knows that a flying bird cannot be struck by shooting directly at him unless he is going straight away. Even the rifleman, shooting a missile with a velocity of three thousand feet at a slow moving deer, soon learns that his bullet will not land precisely where he has held, that he must make a certain amount of allowance for speed of the mark and time of bullet over the course.

Knowing that he must lead, the most natural thing for the gunner to do, and what he usually does do is to point his piece the distance ahead that he thinks correct and fire. Maybe he has had some preliminary practice at tin cans thrown up; in that case he will probably throw his gun plenty far enough ahead on the line he can see the bird will take, and then wait until the mark approaches near enough to the gun, upon which he pulls the trigger. The writer began wing-shooting in just that way, and he didn't in the least know that it wasn't the right way. It worked too, on birds that were not too fast, on rabbits, crows, meadow larks, quail that were going away, chickens and other things. If any man tells you that he tossed his gun up ahead of the duck and fired, such was his method of taking lead.

By and by the shooter discovers, particularly in duck shooting, that if he first sights the fowl, that is covers it, and then moves his gun just so far ahead, with a quick movement, practically a jerk, that he will be more accurate about his allowance and more successful in his shooting. His idea is to jerk his gun ahead and shoot as the piece stops at the distance calculated upon. Our marksman either doesn't know anything about the carry through, or he has never practiced it successfully. Sighting the mark and then jerking the gun ahead can be used successfully, but a jerked gun is not a well governed gun, for the lead depends on the strength and quickness of the jerk, and upon the ability of the marksman to check his piece at just the right point. He may jerk his weapon too hard and too fast or not hard enough and not fast enough. Besides he is timing his trigger to that jerk and the two may not work together. Just at the instant the quick movement starts the trigger pull may start also, or it may be delayed and the gun will have to be fired after the forward motion has ceased. In either instance he loses some of the lead he has calculated for. I remember the time when I used to sight my duck and then move the gun down and up again with a sort of circular sweep, timing the trigger to yield as the sight again cut the line of flight. That was in the day when most of my shooting was snap work, and I could better time my trigger and time my lead to the upward movement of the barrels than to a swing.

Many a duck shooter is using some such system now, or maybe a more direct snap, simply getting under the flight line and then raising his weapon at such an angle that it will take the correct lead as the flight line is cut.

This style of shooting works very well when ducks have decoyed, in jumping them, in all instances where

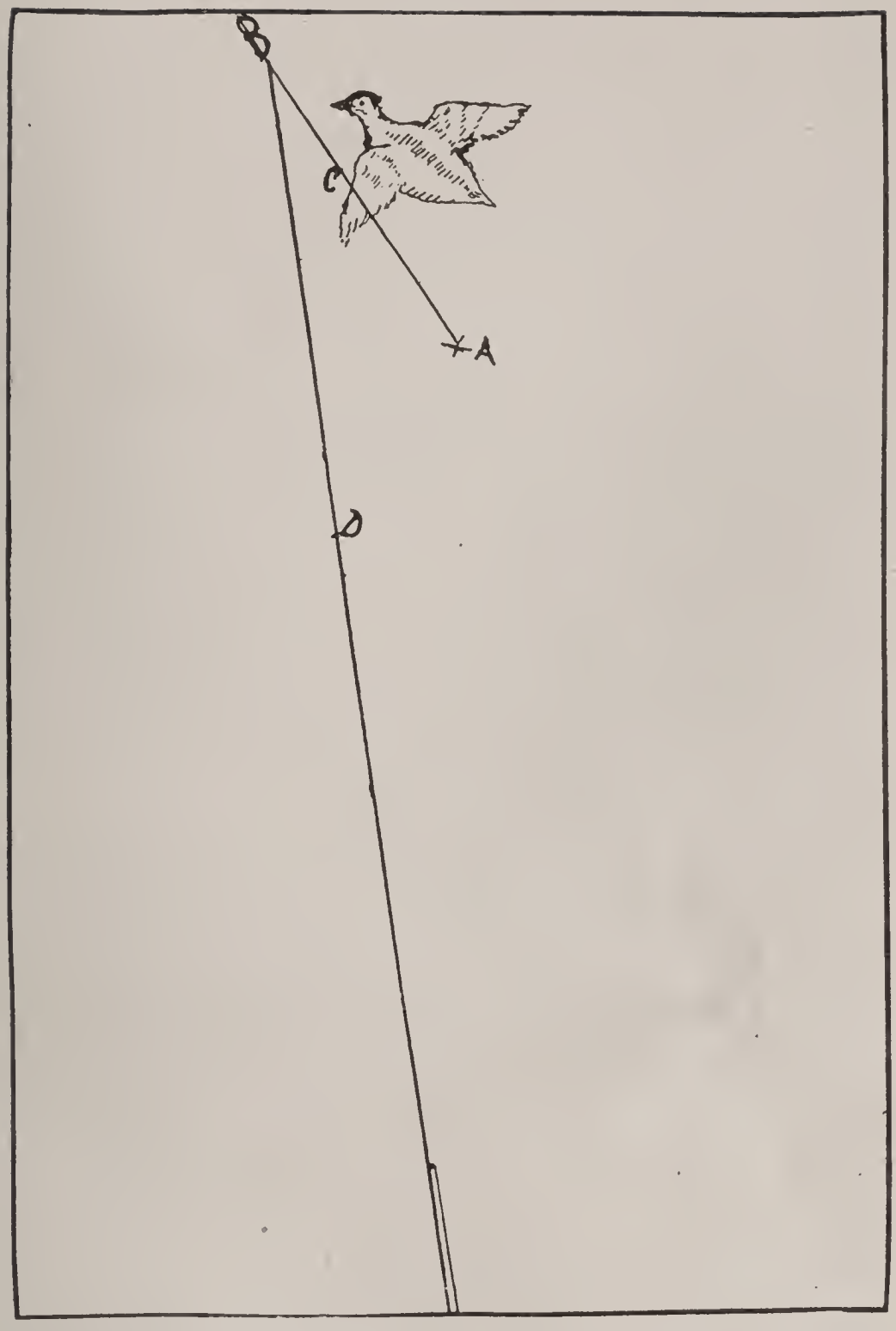


Rough Snap.—An attempt to show the gun movements before the piece comes to rest on the bird

fowl are going away or have not acquired top speed. It works on quail, snipe, woodcock, grouse and nearly all "ground" game, that is on birds which are flushed from the ground or even from the water, usually taking a course more or less away from the gun. We would call this kind of aimimg either snap shooting or a half snap.

What might be termed the stationary lead would work very well if the gun could be discharged electrically, instantaneously. But how much better we could all shoot, and how much less interesting it would be if the shot got there instantaneously too. This book would not be necessary then, and we would all be born wingshots, and we wouldn't have anything to shoot at. The trouble with a snapped lead is trigger pulling time, plus lock time, plus time of shot up the barrel. It has been estimated or measured, if claims are true, that from the impact of striker on primer to the emergence of shot from the muzzle requires about one two hundred and fiftieth of a second, and it is estimated that the trigger time of individuals varies from one twenty-fifth to one hundredth of a second. I have learned that my own trigger time is about one foot and a half in the flight of a quail. If the quail is given a speed of sixty feet a second, my trigger time is one fortieth of a second. Locktime might be one five hundredth of a second.

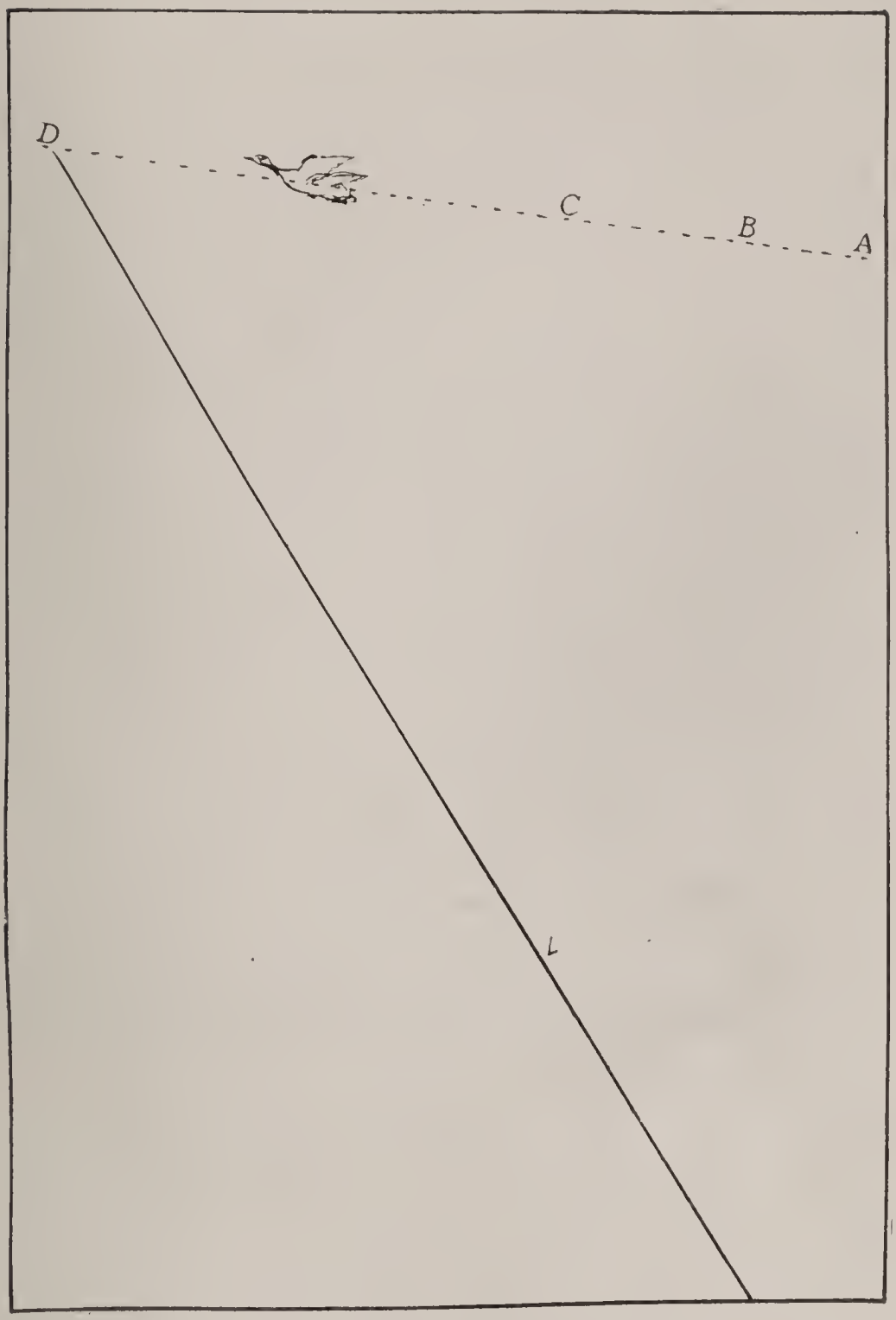
Working out the above figures into feet of a duck's flight at ninety feet a second, and we have a loss equal to two feet nine and a half inches as the loss in lead due to shooting with a still gun. This would insure a missed bird even though theoretically the allowance was correct. In order to overcome such handicap shooters prefer to keep the gun moving along with the bird until trigger is pulled and even afterward. This



Half Snap.—A, where the gun points when brought up; A to B, line of gun movement in aiming; C to B, lead; D to B, line of fire; B, point of aim

means that they swing with the mark, and hence we have shooting with a swing. In order to swing with the fowl the gun is usually brought up on him from behind. This insures that the line of swing travels faster than the speed of the mark for it has to overtake the mark and pass it to a given lead, all in a very brief space of flight. The line of swing may therefore travel twice as fast as the bird flies, and we have a gain from swing. If the gun traveled right along in front of the duck we would have neither gain nor loss from swing, but if it traveled twice as fast as the bird flew we would have a gain from what is known as the rapid swing of about three feet, which needs to be deducted from theoretical lead, that is from a lead based on the speed of missile as compared with the speed of target. Some men swing much faster than others, and hence we have the fact that very few marksmen agree as to just what allowance must be given, the variation being in direct proportion to the speed of swing.

Figures have been worked out whereby no conscious lead need be given a passing fowl within forty yards, the entire lead being unconscious, secured entirely during the interval of pressing the trigger to the emergence of shot from the muzzle. It is to be borne in mind that a man does many things of which he is not conscious. For example when he has swung just past the duck, and right then his brain commands "pull trigger," to his own mind he has pulled trigger right there and then, and the subsequent gain of gun on bird he never knows anything about. Ask such a man where he held on a passing bird at forty yards and he will tell you right in front of its head. Tell him of the speed of his shot and the speed of the mark, and that he must have been so many feet or yards ahead in order for shot and bird to meet, and he will laugh at



A swinging aim. Length of bird, two feet, lead 4 feet. A, where the bird is when gun starts to shoulder; B, where the bird is when gun comes up; A to C, the distance the gun was behind the bird when swing started; entire length of swing 12 feet; swing of gun at muzzle about an inch

you. He knows where he held and that the duck was killed and that was all of it.

Speed of swing is a good servant but a poor master. The swing may become so rapid that it cannot be governed or controlled, too rapid to permit us to base the trigger pull on it. In duck shooting by all means acquire swing, but make it uniform rather than too fast; make it so reliable that lead can be based upon it rather than so rapid that no lead is required. If any man thinks that he can swing a gun very fast and yet strike any given point with the charge, let him try that out on a stationary mark. If his gun is moving too smartly he will find his shots strung out widely along the line of swing, some shots going too soon and some too late. It would be exactly the same thing in case of a duck flying. Besides, it is only a matter of distance when conscious lead will have to be taken anyhow. By swinging sharply, judging from my own experience, a passing duck may be killed by holding just in front of him—if he is under thirty yards. At forty yards it will be found wise to lead two or three feet, and at sixty yards double that. I am willing to bet that the man who swung fast enough not to require any lead at sixty yards, couldn't hit the duck if he were motionless in the air.

Snap shooting pure and simple means to throw the gun to the shoulder, pointed directly at the spot to be hit, and then pulling trigger without moving the gun up or down or sidewise. It is a rather rough sort of an aim, as any man who tries it on a stationary mark with a rifle will discover. The movements are too many and too complicated, and accuracy depends on every one of them being exact. The feet must be placed, the body balanced, the gun come up true to its place on the shoulder, the check fit—all these things being

done instantly without any chance to correct by a second, *closing movement.* The fixed intention of the shooter is to pull trigger the instant the gun comes to level, and whether it is then off or on, he pulls trigger. Besides, the bird may be doing something unforeseen during the interval. When all is said, this kind of aiming is adapted only to guns bored very open, and to birds of very regular flight, going away from the gunner.

A better way to snap is to get the gun up, directed very close to the mark but sufficiently under it to leave the target in plain view, pause long enough to notice the space between where the piece is pointed and the mark, and then close the gap on the shortest line. This is a simple way of aiming and a very killing style on all upland game. The closing movement can be made very rapid, too fast for the bird to do much dodging, and the instant this final aim starts to close in the marksman knows where it will end, and can time his trigger very accurately. With this kind of aim, usually termed a half-snap, any kind of pattern may be used effectively, even a full choke. It is a little slower than a full snap but not very much, not more than five or ten feet in the flight of a quail. This is the style of aiming generally used on quail, snipe, and on live pigeons shot from the trap—on nearly everything except passing waterfowl. Preferably guns for snap shooting should throw their charge a trifle high, the final movement usually rising and often betrayed by a premature let-off, throwing charge under.

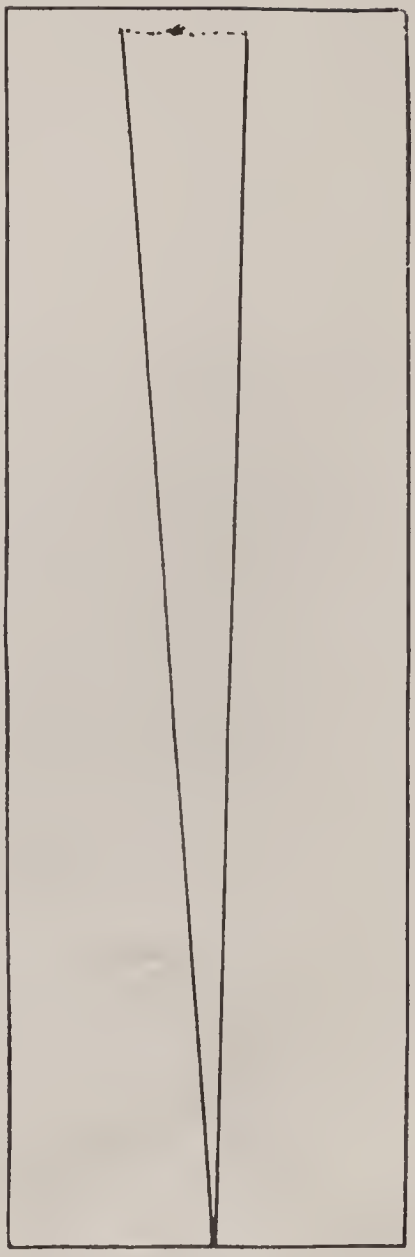
The swing is the only style of aiming adapted to duck shooting when the fowl are passing. Some men swing along evenly in front of the mark, the gun traveling no faster than the bird. This is a very consistent manner of aiming, but loses all gain from swing that is accomplished with a more rapid gun

movement. Men who use it will be found to take more lead, but will still kill regularly.

The rapid swing can be developed only by a long course of practice. It might be said that the more a man shoots ducks the faster he will swing his piece and the less lead he will take. Ultimately he may not know how much lead he is taking, but back of that is a world of experience during which he aimed with the utmost care, knowing how much allowance he intended to make, how much he did make, and why he hit and why he missed.

The usual instructions for learning to shoot with a swing, is to direct the beginner to throw up his gun behind the mark, and then swing after it until he passes the bird and reaches the desired lead. The advice is all right, but it generally leads the marksman into throwing his piece up too far behind. He sees where the fowl is, and means to throw up his weapon pointed a few feet behind that particular point in the air. A man's mental and nerve and muscular machinery is rarely fully understood. When his brain commands "put the gun up pointed right there," his nerves and his arms obey and the gun comes up according to orders, in a jiffy, perhaps in a quarter of a second of time. Meantime the bird isn't there any more; in a quarter of a second a fast duck would fly twenty feet, and the gun that was intended to be pointed ten feet behind is now thirty feet back. That scares the marksman, for the fowl is getting past the point it was intended to kill him. The piece would now be swung after the mark at a great rate, too fast for accurate holding, or if the swing is carefully regulated the shot is delivered late. Even if it is then successful the second barrel probably will not be. Endeavor to throw up the gun pointed directly at the mark, and during

the fraction of a second necessary to steady the weapon the fowl will get plenty far enough ahead. In order to point directly at the fowl or to find the arm pointing there after it is up, it will be necessary to start the piece up in front, not behind. Not too much ahead, of course, for we might then be tempted to pull trigger at once, but use judgment. If it takes a quarter of a second to get the gun up, it will soon be learned how far the bird will fly, and where to point the piece in order to make the closing swing very short and very accurate. It is a well known principle that a short straight line is easier drawn than a long straight line, and on the same principle a short swing is more apt to be accurate than a long swing.



An attempt to show the size of the duck, drawn in proportion to his distance, 40 yards. Swing at muzzle less than inch.

Long swings are essentially gun pottering; long aims are pottering anyhow. The same principle applies to half snap work. Don't throw the gun too far under, if the final aim is to be a snap, and never behind when that can be avoided. I once saw a man who had read or who had been told that the way to shoot a rifle was to direct it well under the mark, and then raise the piece steadily until the bull was covered, when he

pulled. In order to be sure that he was doing the thing right he pointed his piece about four feet low at fifty yards and then raised it to the bull—I never saw him hit anything much even by accident. Had his aim been obliged to travel only about four inches the scheme would have worked better.

The shorter the swing or the shorter the closing movement of a snap the more accurate the lead, when lead is required or the more accurate the snap in that kind of aim. In the old days when I did more or less trap shooting I found that I could do much better at known angles. The gun would then be pointed a little distance from the trap, close to what I knew would be the line of flight; as the bird shot past I would then be in much better position to take him than I would have been with the gun pointing at the trap house, and therefore obliged to follow up. Live bird or game shooting is known angle work, if the "dog gone" bird would keep his course. Even if he is the kind of a chap which dodges and swerves with lightning quickness, the gun that is pointed close to him is in much better position than the one which has to make a long swing after him.

All swinging movements after the gun is up, no less the closing or final aim in a snap shot, are body movements. The feet are a fixed pivot and on them the body is swung, sidewise, up or down. Such a body movement is very even, smooth, and regular. In comparison arm movements are jerky and inaccurate. That is one reason why a rough snap is not a killing style of aiming since the gun is then governed entirely by the arms

Chapter V

SHOOTING WITH THE MIND. SELF CONFIDENCE. SHOOTING HABITS

A MAN really shoots with his brains, memory being a large factor. Deprive us of the remembrance of what we had done and how we did it, and we could accomplish little or nothing. Take one away from some game at which he was expert, keep him off it for a number of years, some bird perhaps on which he was a good shot, and when he returns to that bird he will find himself obliged to learn over again. His memory of just how he accomplished the thing has dulled.

In the same way the individual with an analytical turn of mind will become the best and most consistent shot. He is constantly looking for reasons, and when he has reasoned the thing out he knows and doesn't forget. Men who are clever mechanics very often become equally clever shots, and the good shot nearly always has mechanical ability. Our mechanic has the trained brain which insists upon an act being performed in a set way, and this leads to results.

Certain things must be ground into the memory until they cannot be forgotten. One of these things is the shooting of the gun. With a certain load in a certain gun, some species of game bird can be killed regularly up to a given range and no farther. Learn this and don't strain the gun, or at least don't lose confidence in your aim because this gun fails to kill beyond its

range. Some guns, with stocks that are not quite right, perhaps, vary their center of impact with the position the shooter assumes, or with the swing he gives. Possibly it will be learned that when a swing is taken to the left less lead is required than when swinging to the right, possibly the elevation should be less on a right swing and more on a left swing. One gun that I had used to shoot to the right and high every time I wheeled to take a bird that was going over my head. It took time and experience to learn that I had to hold a foot low and six inches to the right on every quail which had passed over my head and was going away. Now and then gun or man will shoot true on the drivers but will fall under on a swing, or it may be just the reverse.

In learning where to hold and why it may be necessary to make notes, possibly with diagrams. If these are made in the shooting note book, mark out the position of the gun, where the bird arose, the course he took (show this with a dotted line, at the same time show where the gun came up and where it was carried to, the lead, and the result. Such diagrams will be found worthy of study, at odd times when not shooting. If a like hold on a like flight shows a miss one time and a kill another, occurring often enough and near enough to indicate that the gun was not in fault, the problem is worthy careful study. The man who can't account for his misses will never learn to hit well. The great game of the wingshot is to learn to account for his misses, and if he can learn the reasons for one miss today, which he couldn't account for yesterday, that is making fine progress. The miss might be due to a loss of time, or to an attempt to quicken time, or to an attempt to change time, or it might be due to faulty mechanics, or it might be due to carelessness,

or it might be due to overcaution. In any event the reasons for the miss, according to the best judgment, should be recorded along with the diagram. The time will come when many of those misses can be prevented, by knowing how and why they occurred.

No man ever became an expert shot without a world of self-confidence. Self-confidence without a wealth of sustained success back of it is another story. Soldiers will all tell you of the "bird" who declared that he would be the first over the top, who fully believed himself that nothing could scare him, yet he was the first man to run. That kind of self-confidence never got any one anywhere yet. But the kind that is based on experience, a confident belief in being able to do a thing because it has been done time and again is what our shooter needs.

Self-confidence of the right sort can't lead us wrong unless we drift into carelessness. I knew a lad at school who was so confident he could clear the bar at six feet that he ran at it smilingly, and knocked it down. He never had another chance, and the coach added some adjectives to the term we have used.

Self-confidence should obviate worry and overcautiousness, both great enemies of a good performance. The shooting mind is a single track mind, and should not be switched off the main track by worry concerning present, future or past performances. What usually causes a shooter to displace confidence by worry is an audience, and the audience may be only one person. The only way to overcome that kind of worry and nervousness is to shoot in company until you don't care a tinker's damn any more who is watching. Most of us learn faster and put up a better performance when alone, but man is such a gregarious animal that he is not willing to tolerate that sort of

thing very much. A shooting mate destroys our time, makes us anxious, makes us nervous, brings out selfishness, brings out generosity, and no one except a boy or a woman ever takes any pride in our skill, yet the right fellow is no less indispensable than the dog, the gun, and the game in the old, red briar patch.

A man without shooting habits could never put up a consistent performance—in fact, however, such a man could not be found in a veteran shot. Shooting habits are certain to be developed, but they may be bad habits as well as good. Good habits lead to hitting and bad habits to missing, as a matter of course. Habits lead to ease and uniformity and, if they are correct, to accuracy. Habits are a method that nature has of relieving the brain of unnecessary work. Every trained mechanic is a mechanic from habit, and goes along more or less automatically. When the brain consciously interferes with habit the shooter is put under a strain and bad work results.

It is important when developing habits and methods not to further false movements and fool stunts. I knew one man who always spit on his left hand when he went in to flush, no spit no hit; another had to carry his barrels up across the body, pointed up at an elevation of forty-five degrees—couldn't get into action properly otherwise; another had to stand in trap position, gun butt to shoulder, and he had to have some one else or the dog do the flushing; one man will shove his left hand clear out beyond the fore-end, and another will bring it back close to the guard; I knew one man who tried to walk in to flush by keeping the left foot in front of the right, going hitching along, stepping up with the left foot and bring the right up behind—that was the most laughable stunt of the lot.

A few years ago it became a fad to teach factory

employes efficiency, the elimination of all false and unnecessary movements. The idea was a good one, but it didn't work out because the average man was unwilling or unable to concentrate sufficiently to acquire the new and improved habits. He had habits and he intended to keep them or quit the job. The shotgun shooter needs to do that very thing though; he needs to acquire the habit of doing a thing in the shortest and easiest way, with the least possible loss of time, with the least possible number of motions. The only thing that keeps a man of correct shooting habits from hitting all the birds is that the game has not been grounded in equally good habits. The habits of game, method of flying, habit of swerving, and other things we will take up later.

We believe that it will be found wise to get the habit of snapping all upland game and of swinging on all waterfowl. Swinging on upland game entails a loss of time that often can ill be spared, while snapping passing ducks never has worked. The writer admits that he never has been able to put this theory into practice, but then he is an old timer and old men develop and stick to habits much more determinedly than the youthful. At one time I snapped quail, woodcock, grouse, and snipe, being very good at it. Circumstances were such that for the next ten years most of my shooting was at ducks, and I got the fixed habit of swinging. On the quail the swinging habit now persisted. If a quail got up and quartered to the left, the chances were ten to one that I threw the gun in behind him, passed and fired, when I had as well thrown the gun in front of him in the first place, since a quartering quail needs very little allowance. Nevertheless, the crack shot ought to be able to employ the swing or the snap at will. Very often the snap shot

Missed

will get in a deadly charge while the man with the swing is throwing his into the brush after the bird is under cover.

Habits can be acquired only by a repetition of a movement, a series of movements or something else that is done regularly in the same way. Shooting habits would be easily acquired, if we could shoot enough. If we could have an opportunity of shooting a hundred ducks a day for ninety days, I'll wager that we came out with fixed shooting habits, habits of aiming, a fixed time, habits of leading, and habits of hitting. That is one reason why our trap shots are shooting ninety-five per cent. They have a chance to develop habits and they do it to a nicety. Few of us ever have like opportunities on game. The old-time market gunners had, and few duck shots of today can compare with them. Gun habits and ease of handling the arm can be acquired in a way by simply repeating movements—raise the gun, aim, swing, pull trigger, and go over it all again and again. It is said of the Englishman that when he sees a bird flying he raises his cane, sights the flying mark, swings to his lead and says bang! That is not such a fool thing as might be thought, for our Briton is simply trying to keep up his shooting habits.

Everybody knows that the good shot is the one who can concentrate on his job; so is a good workman of any kind. It ought to be a simple thing to concentrate on an aim which lasts less than a second, but it doesn't seem to be. From the time a bird breaks cover until it is killed or missed, or from the time the gun is raised on a passing fowl until it is fired, our marksman seems to have time for a number of things besides aiming and pressing trigger. Anxiety may possess him, fear of missing; he may keep thinking of

the brush and wondering if he can cover the mark before it escapes; he may be trying to do the thing with style and grace in place of confining himself to simply hitting. I knew one trap shot who had a reputation for shooting quickly, and the only thing he seemed to think of was how quickly he could fire. All that was necessary to make him miss was to suggest that somebody else in the squad was getting them in remarkably fast time.

About half the birds are missed by the shooter "poking" them, trying to see that his sight was in the right place, maybe trying to line up two sights, maybe trying to follow out some fool system that he had marked out as correct. The thing to do when a bird rises is to get the eyes on him and the mind on him. Note the nature of the ground beforehand, the position of companions, the trees or cover that may intervene, the probable course of flight, and after the birds break cover select the one you mean to shoot and *don't see the others*. If you can see two birds at one time you can't hit either one. If you can see a tree while the bird is flying toward it, you may hit the tree but not the bird; if you can see the gun while it is being aimed, you may shoot all right but you won't hit.

Even lead is not thought of when a shooter is actually aiming at a winging bird. Let the lead be given by instinct, which is only another name for subconscious government. A man needs to feel that he is holding right, that he has held right, that he led correctly, that he should have hit. When the writer feels that he has held true, or feels that he has led the proper distance, and he doesn't kill, he always cusses the gun, knowing that there was either a hole in the pattern or else the gun doesn't fit him. If a marksman cannot take his lead or his elevation without looking at gun's sights

he can't shoot anyhow. Get acquainted with the fit of the piece, get acquainted with the trigger pull, get acquainted with the weight of the arm and its natural speed of swing or the shooter's speed when using it, but when the bird is in sight, think of nothing but that bird, see nothing else, and know nothing else.

I once asked a good market shooter how he managed to kill ducks with such regularity. He said, "I shoot at every duck with all my might." I took to watching him, and that was exactly what he seemed to be doing. When in the act of aiming his eyes bulged out, and his expression would have fitted a prize fighter when in the act of delivering a knockout blow. Wouldn't that kind of thing be hard work? It sure would. Fine shooting is neither for the aged, the infirm, nor the lazy. Is it worth while to concentrate to such an extent, to put so much vim into the work—when merely shooting for pleasure? I don't know; I think not. I believe there is more fun in just plugging along and taking things as they come. The man I remember as seemingly getting more fun out of his sport than any other missed about half the time and apparently got as much enjoyment out of his misses as he did from his hits, I can commend that state of mind and it doesn't usually lead to missing either. Jealousy, over-anxiety, nervousness, eagerness, lack of mechanical training, and lack of knowledge account for most misses.

The professional and other trap shots possess a different sort of concentration, a prolonged and sustained concentration. They are obliged to keep their minds on the shooting for hours at a time. If any one doubts this let him attempt to start a conversation with a good trap shot while he is shooting. I once asked one of them what he was thinking about while making a long run on clay birds. His reply was that

he was not thinking; he was just shooting. I concluded that the professional trap shot who could talk and shoot at the same time never became a professional shot. Shooting as a sport is one thing and shooting as a profession is another, the very hardest work that a man ever did. Many of our great shots finally quit by reason of a nervous break-down, and I am not wondering at that either. The writer once made up his mind to kill twenty-five doves straight as they came into a water-hole, and after several attempts did it. It spoiled the whole thing, took all the fun out, and he never afterward tried that again. Neither do I like to shoot with a man who feels that he has to kill with every charge—no fun in him either.

One thing concentration very properly does for a man which nothing else would. It prevents him from paying any attention to recoil. The recoil of a light twelve bore gun, fully charged is considerable—put the butt against a man's stomach and pull trigger and he'll think he is killed, but the same man can shoot at ducks all day and never feel the gun go off. It is said that when an Englishman shoots his big 600 bore elephant rifle it always kicks him down, but he can never afterward remember how he got down nor how he got up again. Few men can shoot at geese and remember afterward whether the gun kicked or not. I have cussed it for not kicking before now, wishing to be sure that the old fowlingpiece was able to do something at one end or the other. I once knew a fellow who was standing outside of his pit when geese came along. The first barrel kicked him backward and he fell into the pit in a sitting position. Firing his second barrel he killed a goose and when it was all over declared that he had fired both barrels while sitting in his blind as usual.

Chapter VI

SPEED OF BIRDS AWING. SPEED OF SHOT CHARGE. THEORETICAL LEAD.

THE speed of a game bird in flight is of course of the greatest importance to the wingshot. Every time he changes from one game bird to another, he will have to contend with a different speed of flight and a different lead. Speed of flight, to be sure, has to be learned in terms of allowance, and this can be acquired only by much experience. The best we can do is to treat the subject of this chapter in general terms, leaving much for the reader to acquire through actual shooting.

Occasionally ducks have been timed over a given course, and their time has been variously given as from forty to better than sixty miles an hour. Some species are considered much faster than others, and no doubt are, but I have observed that when two or three kinds happen to be flying together that all readily keep the same pace. A mallard is not supposed to be a very fast bird as ducks go, yet I have seen a lone mallard keep right along with a flock of greenwing teal, and he didn't seem to have any trouble about keeping up. This led me to studying speed, and its exceeding variability. We will take that up presently.

In a general way it might be said that birds with short wings have a very even speed while long-winged fowl have the greatest change of pace. I believe that

a quail has the most even flight of any bird the sportsman has to deal with. Take full grown and strong quail, and the only variation that can be noted in flight speed is that occasioned by the wind and by cover, brush or other obstruction. The quail has a lot of engine power, but his propellers do not catch much air, so have to make so many hundred revolutions a second to make the machine go, and I might add, he always does that very thing. The wings of a quail are drawn in pictures, but in actual flight they simply make a bright sheen of light on either side of his body. A quail is supposed to be able to make ninety feet a second, mile a minute, but I think sixty feet would be more nearly correct. Moreover, I think his highest rate of speed is gained before he has traveled thirty yards, and that after covering from seventy-five to a hundred yards his pace will be lessening. I have run along-side of a flying bevy of quail in an automobile sometimes, machine going forty-five miles an hour. For fifty yards or so they would keep even pace with the car, perhaps gaining a little, after which they would gradually drop behind. A passing quail doesn't require as much lead as a duck by any means.

A dove has less speed than a quail, as he gets off the ground, but our dove is a great sprinter when he takes a notion. I have been driving along with a dove, going around fifty miles, with the dove out a hundred feet to one side of the road; all at once the bird took a notion to cross the road in front of the car, and that is just what he did, whipped up and went right around us, apparently not over exerting himself either. Just how fast a dove can fly when he sees fit or is frightened, nobody knows, but his ordinary gait when he sees no particular reason to hurry is about fifty feet a second.

In the last couple of years I have been counting time

on various game birds—sometimes holding a stop watch on them. The surprise I got was in their tremendous variation in flight speed. Occasionally an old mallard will go loitering along, dipping down here and rising there, turning his head from side to side, and he won't be making more than from thirty to forty feet a second. Again he will flash by at a good ninety, and maybe faster with the wind behind him. Right there lies the secret of a lot of missing.

Take our greenhead when he is unsuspicious of danger, and he is an easy bird to hit; scare him with the first barrel and he is an altogether different mark. The answer to this problem is, don't jump up to shoot ducks, don't let them see you before you shoot. However, I believe that the average speed of a mallard, pintail, spoonbill, gadwall, and widgeon is not over sixty feet a second. Teal are faster when they are in flock formation and traveling. The little chaps always seem to be in a hurry, and their average speed should be around seventy feet, with a possibility of reaching a hundred when a wind is back of them. The canvasback appears to be the uniformly fastest duck of the lot. He is slow about getting away from decoys, slow about rising, but when under full steam, ninety feet a second is sure easy for him. Bluebills and redheads fly rapidly, but hardly as fast as a canvasback. Maximum lead should be given the canvasback, and from him on down to a mudhen which anybody can hit.

Can we tell anything about whether a fowl is going at top speed or not by looking at him? Not very much. A duck has eyes a good deal like anyone else, only better. It can be seen whether or not he is looking for something, a play ground, or other ducks, by the way he turns his head and by the irregular course he keeps. On such occasions he is not going fast. As a

general rule birds which are flying alone or in pairs are not winging so rapidly as those in full flocks. Fowl in flocks have to keep the pace and it usually seems to be set by some old sprinter. Birds high in the air have a more uniform speed than those near the water, but it has always appeared to me that the fastest fellows were those that nearly skimmed the water, especially when they had just dropped from a height and were making wide circles.

While the speed of the bird is always a subject for good judgment and is never certain, owing to the ability of the bird to fly at the rate he feels inclined, yet, fortunately we have reliable figures for the speed of our missiles. We will, therefore, give the average velocity, time over the course, and theoretical lead for some of our most common loads. In giving the lead we will take the rate of flight at sixty feet a second, not because that is the true rate, but for the reason that we shall have to arbitrarily select some speed or other, and sixty feet is about the minimum rate we have to deal with. Ballistics of the upland loads will be taken at distances up to 40 yards and waterfowl cartridges from forty to sixty yards. In giving lead the birds will always be considered as flying at right angles to the gun, and from this data the lead allowance for quartering birds can be reckoned.

12 BORE. UPLAND CARTRIDGE

No. 9 Shot

Load		Muzzle Velocity Ft. sec.	Remain. Velocity, Ft. sec.	Average Velocity, Ft. sec.	Distance, Yards	Time over the course, Seconds	Theoretical Lead, Feet	Energy per Pellet, Ft. lbs.
Powder Dr.	Shot							
3	1⅛–9	1290	900	1136	20	.0528	3.168	1.34
3	1⅛–9	1290	775	1062	25	.0706	4.236	1.00
3	1⅛–9	1290	680	1025	30	.0878	5.264	.77
3	1⅛–9	1290	600	945	35	.1110	6.660	.60
3	1⅛–9	1290	530	900	40	.1395	8.370	.47

No. 8 Shot

3	1⅛–8	1290	920	1147	20	.0523	3.138	2.00
3	1⅛–8	1290	815	1083	25	.0692	4.152	1.58
3	1⅛–8	1290	725	1050	30	.0857	5.142	1.25
3	1⅛–8	1290	650	975	35	.1075	6.450	1.00
3	1⅛–8	1290	585	925	40	.1370	8.220	.83

No. 7½ Shot

3	1⅛–7½	1290	935	1160	20	.0517	3.10	2.48
3	1⅛–7½	1290	835	1095	25	.0685	4.112	1.97
3	1⅛–7½	1290	750	1061	30	.0848	5.084	1.60
3	1⅛–7½	1290	675	986	35	.1064	6.384	1.28
3	1⅛–7½	1290	610	940	40	.1341	8.046	1.05

No. 7 Shot

3	1⅛–7	1290	950	1170	20	.0513	3.070	2.95
3	1⅛–7	1290	850	1103	25	.0680	4.080	2.32
3	1⅛–7	1290	770	1070	30	.0841	5.046	1.92
3	1⅛–7	1290	695	1000	35	.1051	6.306	1.56
3	1⅛–7	1290	635	950	40	.1330	7.98	1.32

These figures, except those for lead were taken from the ballistic sheets of the Du Pont Company. Figures for average velocity were worked out in accordance with time over the course.

The instrumental velocities of these loads are given by the Du Pont Company and are found below, together with other sizes of shot.

INSTRUMENTAL VELOCITIES, LOAD 3 DRAMS, 1⅛ OZ. SHOT

Shot Sizes, No.	Distance, Yards	Instrumental Velocity, Ft. Sec.
2	40	995
3	40	980
4	40	962
5	40	945
6	40	920
7	40	902
7½	40	895
8	40	875
9	40	860
10	40	837

12 BOREX. WATERFOWL LOADS

Load 3½—1¼, Different Shot Sizes

40 Yards

Shot Size, No.	Muzzle Veloc.	Remain. Veloc.	Aver. Veloc.	Distance Yards	Time over Course	Lead, Feet	Energy per Pellet Lbs.
2	1300	790	1040	40	.1154	6.824	6.90
3	1300	770	1030	40	.1167	7.002	5.60
4	1300	745	1012	40	.1176	7.056	4.00
5	1300	720	995	40	.1206	7.236	2.93
6	1300	695	970	40	.1237	7.423	2.10
7	1300	670	950	40	.1263	7.57	1.45

45 Yards

2	1300	735	999	45	.1351	8.196	5.95
3	1300	710	985	45	.1370	8.220	4.50
4	1300	685	975	45	.1383	8.298	3.40
5	1300	658	955	45	.1423	8.538	2.45
6	1300	632	925	45	.1463	8.798	1.75
7	1300	605	900	45	.1508	9.048	1.19

50 Yards

2	1300	690	955	50	.1568	9.408	5.50
3	1300	665	945	50	.1588	9.526	4.25
4	1300	638	932	50	.1608	9.64	2.95
5	1300	610	904	50	.1659	9.95	2.10
6	1300	580	880	50	.1710	10.26	1.43
7	1300	550	845	50	.1775	10.65	.99

55 Yards

2	1300	650	920	55	.1792	10.752	4.65
3	1300	625	905	55	.1821	10.90	3.50
4	1300	595	890	55	.1851	11.10	2.55
5	1300	565	860	55	.1915	11.49	1.80
6	1300	535	832	55	.1980	11.88	1.25
7	1300	505	800	55	.2068	12.40	.83

60 Yards

2	1300	610	886	60	.2030	12.18	4.12
3	1300	585	868	60	.2071	12.42	3.08
4	1300	555	852	60	.2112	12.66	2.20
5	1300	525	812	60	.2191	13.14	1.55
6	1300	495	792	60	.2271	13.62	1.06
7	1300	460	753	60	.2389	14.32	.69

65 Yards

2	1300	570	854	65	.2284	13.70	3.60
3	1300	540	833	65	.2340	14.14	2.62
4	1300	510	810	65	.2394	14.36	1.85
5	1300	480	782	65	.2491	14.94	1.30
6	1300	448	753	65	.2589	15.52	.88
7	1300	415	710	65	.2747	16.52	.56

70 Yards

2	1300	540	822	70	.2554	15.32	3.23
3	1300	510	800	70	.2625	15.75	2.32
4	1300	480	780	70	.2697	16.18	1.65
5	1300	450	745	70	.2817	16.90	1.14
6	1300	415	715	70	.2937	17.62	.75
7	1300	380	668	70	.3143	18.85	.47

Instrumental Velocity for The Duck Loads at 40 Yards.

No. 2	Instru. Vel. 1040 ft. sec.
No. 3	Instru. Vel. 1030 ft. sec.
No. 4	Instru. Vel. 1012 ft. sec.
No. 5	Instru. Vel. 995 ft. sec.
No. 6	Instru. Vel. 970 ft. sec.
No. 7	Instru. Vel. 950 ft. sec.
No. 7½	Instru. Vel. 940 ft. sec.
No. 8	Instru. Vel. 925 ft. sec.
No. 9	Instru. Vel. 900 ft. sec.
No. 10	Instru. Vel. 875 ft. sec

Space forbids us to take up the many other loads. For the uplands three and one-fourth drams and an ounce and an eighth of shot is often used and would show a bit higher velocity than the cartridge used in this table. However, up to forty yards three drams of powder has a killing velocity and little difference would be found between the two cartridges in practical results.

Many duck shooters would prefer an ounce and an eighth of shot to an ounce and a quarter, and this cartridge would show somewhat higher velocity, but ordinarily the pattern would be thinner. It is much a matter of the way the gun handles one load or the other.

The Super X cartridge has both a higher velocity and shoots a more dense pattern, with consequently a bit longer range. The Super X Record, in three-inch cases, loaded with 1⅜ ounces of shot is the most powerful twelve gauge shell to be had at this time, and perhaps the most powerful that has ever been loaded in 12 bore.

Ten gauge guns in standard loads with an ounce and a quarter of shot have little advantage of the ordinary twelve shooting the same load of shot, and no advantage of the Super X load. In hand-loads,

using Progressive burning powders and about 1⅝ ounces of shot the ten would have several yards on a good twelve but such shells are not obtainable in factory loads at this time.

The smaller gauges, sixteen, twenty, and twenty-eight have practically the same velocities as the twelve, in the table for upland work. Figures for velocities and lead would not be greatly different. Normally the big bores, ten and twelve have somewhat higher velocities than the smaller gauges, though the latter can be speeded up to full twelve bore velocities.

The tables presented herewith can be studied to advantage. They give what the great cartridge concerns rarely do, the average speed over the course, in effect the instrumental velocities at all distances from twenty to seventy yards. The remaining velocities and the remaining striking energies are also valuable. In striking energy a pound and a half to the pellet is supposed to be required in order to insure a killing penetration with sufficient shock to bring down a duck, and by going over the tables the distance at which one size of shot or another ceases to be effective can be determined. For example, number 7 shot falls under the pound and a half beyond forty yards, number 6 beyond fifty yards, number 5 beyond sixty, fours reach seventy, and threes would extend to eighty and beyond. Of course the total weight of the blow that lands on the bird counts, and the smaller pellets place more shot on the mark, which permits sevens to kill at a full fifty yards, sixes at fifty-five or possibly sixty in case of small ducks.

The theoretical lead as given will look excessive to a veteran duck shooter, yet it is the actual, mathematical distance that the gun must be aimed ahead of the bird in order to hit him when he is flying at the

given rate. How the gun gets that far ahead, how much is gained by swing is another story. The novice who holds ahead the distances given here, and who judges his range with any certainty will come pretty close to hitting.

Chapter VII

SHOOTING QUAIL, WOODCOCK, GROUSE, AND SNIPE

NO one can shoot a game bird well unless he is acquainted with the flight of that particular bird. He should know the rate of speed, the lead or hold, and the tendency to dodge or swerve. Much of wing-shooting skill lies in being able to anticipate what the bird will do before he does it, and this implies long acquaintance as well as close study. Being a good judge of ground and cover is also quite important. Seeing his dog on point, and glancing over the ground a quail shot should be able to predict what the bevy will do and where they will go to. It is then his business to so place himself as to make his shots easy.

Knowing his ground and his bird, he ought to be able to tell just where the birds will be lying, how they will rise and the direction they will take, and whether they will rise in a compact bunch or scattered. If on the side of a hill or under a hill the birds are almost certain to top it. The worst thing the gunner can do is to get between quail and the cover to which they are bound to go, for they will then beat back over his head or around him in a short sharp curve, and a towering, overhead shot is next to impossible at short range. Such a proceeding as getting between the birds and where they mean to go frequently necessitates turning on them after they have gone overhead, always a loss of time and a hard shot. So flush as to

drive Bob in the direction he will go anyhow, and thus get an easy straight away or quartering shot. A quartering quail is an easier shot than one driving straight from the gun, for the reason that elevations are then more readily judged—a straightaway bird usually appears to be winging on the level while he may be either rising or falling.

It is rare that a quail needs a lead of more than three feet, unless he has been flushed by some one else and is passing. A quartering bird is usually led from just in front to not over a foot. The tendency of our bird when he has been flushed in the open and has a flight of from one to two hundred yards to make before reaching cover is to rise steadily until he reaches a height of from ten to fifteen feet. The aim should then be high or the gun should shoot a trifle high, the same as a trap gun. An elevation of a foot will frequently center a bird which appears to be flying nearly level. A great many misses are due to under shooting and not many to over shooting. A quick shot is more apt to shoot behind than is a deliberate shot for he can pull trigger faster than he can move his gun, and if he is coming on from behind or beneath is apt to let-off a little too soon.

The roaring rush of a bevy of Bob Whites throw a good many sportsmen off balance, and they quicken their time until they cannot hit anything. A quail in the open cannot escape, if he rises near the gun, without giving the shooter an opportunity within easy range. The bird ought to be taken with certainty, but rarely under twenty yards. The idea of the shooter hurrying himself on a bird that rises within ten yards is all foolishness. Take time and "set" yourself, but when the gun does come up handle it fast. Even in the open our quail can dodge, and don't let him out-

pace the gun. Don't try to shoot with your feet all tangled up unless astride of brush; get your legs in position the first thing, and then bring up the gun and bring it up right. Take time enough to notice the direction of the flight, and point close to the line, closing the aim swiftly and evenly, but not with a jerk.

There is no need to cheek the stock as the trap shot does, for a gun comes up much more swiftly and more easily when the cheek is not against the comb. In a snap shot, and much of the work will be snap shooting, the final aim, the contact of cheek with stock and the pressure of the trigger will all come at the same time, or one will follow the other very closely.

When quail burst out there is little time to pick shots, therefore take the very first bird that gets up, or the first one that fills the eye, which will give more time for the second shot. Even when shooting a general impression will be had as to what the other birds are doing, and move quickly to the very next one in view. If the first bird is taken and the others are following, they will have caught up before recovery is had from recoil, and the pair ought to be killed within thirty feet of one another. If it is necessary to fire two shots at a bird the second barrel should follow within twenty-five feet of the first.

Half the success of woodcock shooting comes from knowing the bird, and the other half from having an open enough gun. Gun should be very light, rarely much over six pounds, open bored, a plain cylinder is best, and number nine shot will be about right.

Considerable advantage will be had from shooting over a dog, not only from his finding the birds but from the warning he gives to the gun. A bird that rises when expected and where expected is another sort of a chap from the one that warns merely with his whistle,

and has the marksman jumping six directions trying to locate him before he gets beyond the underbrush. When found in the depth of the woods or marsh the cock has the habit of climbing up twenty-five or thirty feet, and then dropping away, looking for a new place to alight. He is usually in the plainest view and is the easiest mark when at the top of his bound. The gun should be ready and the snap taken before he starts to descend, for he doesn't remain in sight very long after that.

A woodcock is rather slow of flight when in the timber, but can get up considerable speed when flying from one thicket to another or crossing an opening. Two guns can generally work well together, the one inside cover and the other skirting it. Very often our bird will leave cover and dash out into the open, not rising, there to fly as close to the ground as a snipe, shortly to whip back into timber again. The hunter on the outside will then have the easiest shooting, and will frequently make the larger bag.

Woodcock sometimes cross open land on their way to feeding grounds, making a regular flight, generally just before sundown. On such a pass the birds can be taken the same as ducks or doves, fly very uniformly, and require less lead than a duck. Upon the whole, while woodcock shooting is a very fascinating sport, no such skill is required as would be found needful with grouse or waterfowl. The bird ought to be given a decent chance, and only small bore guns used. My ideal woodcock gun would be a twenty-eight bore, weighing around five pounds. Bags should be strictly limited, if not by law then by the sportsman himself. The cock really has little chance to escape for if he is not killed the first rise, he flies but a little way, and ultimately falls to the gun.

We will include both chickens and ruffed grouse under the term grouse. Prairie chickens, as they used to be shot in August were a simple mark. Prairie chickens in November or December are as hard to approach as so many mallards in an open pondhole. They will then rise at forty, fifty, sixty yards or even farther. The summer chicken climbs six to eight feet high and makes off in a straight line. The same bird in winter will keep rising, perhaps for forty feet and when he gets to the top of this bound he is some distance away and "going some" as well. Plenty of lead will have to be given if he happens to be crossing the gun at fifty yards, and the straight away bird will nearly always be rising and rising fast. Hold well above and well ahead.

Americans have a strange way of killing off about all the game they have and then passing laws to protect it. The writer is as guilty as anybody else. I remember killing twenty-eight chickens straight, in early September when the season used to open, with the young birds waiting to be kicked out. The prairie chicken which waits for the gun to get within twenty yards is a dead bird, the shooter having any skill at all. Chickens will take care of themselves; all they ask is that no shooting be done before November. Forty yards will then be the average rise, and the gun which gets within twenty-five yards has had luck.

The ruffed grouse is both an Eastern and a Western bird, but in the mountains of the West he is not such a wise bird as he is in the New England states. Sportsmen of the Atlantic regions consider him the king of all game birds, and I don't know but what they are right. I'd take more pleasure in bagging five grouse than five dozen quail any time. Occasionally the partridge affords an easy shot, but the rule is the con-

trary. He is a wise bird, and the only one I know that can allow the gun to approach within easy range time after time and still get off without the loss of a feather. If we go into cover after him he will fly right out into the open, but the lad that thinks he can get easy shots by skirting the brush while his dog flushes in the briars will go home without expending many shells. The only known rule that applies is that the ruffed grouse will always do the things you don't want him to.

He is an expert about "taking a tree," about climbing above the open space and into the limbs, about flying low among the briars, never showing above their tops, about getting up behind you when you have no dog, and rising out of gunshot when you have one. The only advice I can give is to always shoot. Shoot at the flash of his wings if he can't be seen, shoot at his shadow along the ground if the grouse is hidden, shoot ahead of the twigs he has just disturbed, shoot at the very sound of his roar if nothing can be sighted —sometimes he will be hit, and missing is no disgrace. When a cock grouse is bagged, take it for granted that no finer feat of marksmanship was ever performed by anybody since the smooth bore was invented.

One barrel of the gun should be open bored and the other well choked. Most of the shots will be at short range, but occasionally a grouse will wing across an opening forty or fifty yards away, and it is well to be ready for him. Shot should be sevens or sixes, driven at stiff velocity, for twigs may have to be cut through. Don't count shells against dead birds—no partridge shooter does that.

More wild yarns have been told concerning the difficulties of snipe shooting than any other bird. For a generation or two every "office gunner" and sporting

writer repeated the old yarn about waiting for a snipe to settle down and quit his corkscrewing and wabbling before the shot was taken. I don't know who started that kind of stuff, maybe Frank Forester or Lewis—anyhow it was passed along from book to book and sketch to sketch. In any event, the bird always settled down to a steady flight after going some forty yards, and then the shot was a very simple one. The whole idea is as big a fool thing as was ever promulgated by men of ordinary sense. The man who waited for a snipe to fly forty yards, no matter if he were then as steady as a hawk standing in air, would miss half his birds, for a jack snipe is a small mark at fifty yards. Matter of fact there is no point where he will settle down to a steady flight, and the farther he gets from the gun the more difficult the shot.

The manner of a snipe's flight mostly depends on the weather. In cold, windy weather he will rise wild, beat against the wind usually in a fairly straight line, that is, his general line of flight will be pretty direct, but in his efforts to get his long wings to beating fast enough he will wabble in all directions. Take this wild flight in connection with an equally wild rise, often he will get up forty yards away, and he is a hard mark. Take the same bird in good cover, when the day is warm and sunny, when he has fed well and is lazy, and he will go away in long, easy tacks, every reach plenty lengthy enough for a fast gun to catch him with a straight snap. On such days snipe may get up at the hunter's feet, and he is so slow in getting out of range that the marksman can take his own time.

The wildfowl shot with his fixed habit of swinging after his mark is rarely so good on snipe as he is on ducks, but the grouse shot or the quail shot ought to be. The bird is to be snapped. Get the piece up close

under him just when he has reached one of his long bounds, and his next tack which should be not less than fifteen feet can be easily intercepted with a quick upward snap. If the first barrel doesn't catch him the second ought to, and where three grouse in fifteen shots is not bad work or six quail in ten, eight snipe in ten should be hit. Always provided the birds are lying well enough to get up within forty feet of the gun.

The whole difficulty of snipe shooting can be judged by the length of the rise. Birds that are regularly getting up within twenty to forty feet of the gun are tame and lazy; they are rarely a difficult mark. Snipe that rise between twenty and thirty yards can be killed sometimes, sometimes not. They afford a good sporting chance, now corkscrewing off, and again swing around the gun. Snipe which will not permit a closer approach than thirty-five yards before flushing can be killed, by luck. The apparently straight away shot is the hardest. The longbill's little jerky movements may then be too rapid to be anticipated with any certainty.

This so-called corkscrewing is really a swerving from side to side, as will be seen if the bird can be induced to fly across the gun. It follows that if snipe prove wild an effort should be made to induce them to give passing and quartering shots. The best fixed habit of the bird is to rise against the wind, particularly when considerable breeze is stirring. The old-time direction to hunt down wind is then quite correct. Jack will not only rise against the wind, but he is liable to fly into it for some little distance before turning. It doesn't matter, the wind or the weather, or the wildness of the bird, if he tries to beat back past the gun under forty yards, he is taking a grave risk, where the marksman knows his snipe.

The sum and substance of it all is that tame snipe, the big, lazy, full-fed fellows, who say "scaipe" not ten yards from the gun, content to drop back into the marsh after a flight of fifty yards, are among the easiest birds that the wingshot has to deal with. The man who cannot stop a big percentage, with ease and certainty, has faulty methods of some kind. He is either trying to wait out his bird, he is swinging where he should snap or half snap, his gun is over-choked for close shots, he lacks self-confidence, or he just simply can't shoot anyhow.

A good snipe dog is a nice thing, partly because any good dog is. His nose must be excellent and he must have sense enough to work to and for the gun or he will do more harm than good. Of course the dog should be given the benefit of the wind, and this means a greater number of birds rising wild and going straight away. If snipe are plentiful and tame I prefer shooting over a dog; if they are wild more birds can be bagged without our canine assistant.

Choice of shot lies between eights and nines. Number ten shot are often used, but they are easily drifted by a moderate wind, and have no advantage of nines anyhow. If a small bore gun is used, sixteen or twenty, one barrel should be modified and the other full choke. A twelve bore might have both barrels modified. Many shots have to be taken at forty yards and more, whereupon the cylinder we have found so useful with the woodcock and grouse leads to much needless missing.

A PAGE OF DON'TS

The English sense of things that are not done is that it means things that should not be done—simply another form of don't do it.

No matter the temptation, don't shoot a duck on the water or a game bird on the ground. I know the advice would appear needless, but I have seen so many birds killed on water by men who knew better.

Don't loan a gun to anybody. A man's gun and his shoes do not fit so well after being used by others. The writer usually keeps one gun which he loans to people who are hard to deny, but he never shoots that gun himself.

Don't take the left side all the time when approaching a standing dog. It is the easiest side to shoot from, if a right hand shooter, so don't ask for the best of it all the time.

If the other fellow persists in taking birds going to your side, don't say anything; accept his excuses smilingly, don't try to serve him in like manner—go without him next time and ever thereafter.

Don't try to kill birds farther than the gun will reach. Shooting on the off-chance of bringing down a bird that is out of range is malicious cruelty.

Don't try to "wipe the other fellow's eye" until he has tried with both barrels. He is naturally anxious to retrieve a miss with his second barrel, and will be irritated if denied the opportunity.

Don't pick up another man's gun and snap it. He might not like to tell you what he thinks of the performance, and then again he might tell you.

Don't ask, or accept any favors from a man who may be able to outshoot you. That kind of thing destroys self respect.

Chapter VIII

DUCK AND OTHER WATERFOWL

DUCK shooting is the billiards of gunnery. Shooting beyond thirty yards, with a full choked gun, every shot must be calculated for, and the shots are infinite in variety. Now the birds will be rising, now dropping in, now going straight away, now coming directly in, now high now low, now at forty yards, now fifty, sixty, passing at right angles, passing and quartering as the fowl goes away, quartering in and quartering out, towering only to break the jump and veer off sharply—rarely two shots the same unless the marksman shoots over decoys or waits for birds to come close in and takes no others.

I have some doubts as to whether shooting over decoys ought to be permitted or whether it always will be permitted or not. Shooting decoyed ducks is simple enough, and many a man can make a good bag over the blocks who would make a sorry showing if forced to take passing birds at ranges up to sixty yards. If the birds are not actually allowed to alight and taken on the water, as sometimes happens, they are shot after they have set their wings and are slowly easing down to the water. That is like shooting at a tin can with a windbreak attached to it so as to make it descend more slowly. After the first shot, if the bird is a mallard, pintail, or greenwing teal, the climb will be almost straight upward. The hold is then one foot above the duck's head at twenty-five yards, and two

feet at forty, up to four feet at fifty. Canvasbacks, bluebills and redheads are slow about getting away and climb out at an angle of from twenty to forty-five degrees. The bluebill climbs up the highest and the canvasback goes off closer to the water than other ducks except possibly the bluewing teal. The trick of taking these birds and where to hold is easily acquired, and the gunner may think he is then a finished duck shot, though he really knows little about lead.

Shooting passing birds would be simple enough, if a man knew lead and could judge distance, and had an even swing. The mark is fairly large, usually the sky is the background and sighting is no trouble, plenty of time is afforded, as a rule, and the shooter has no need to hurry himself, he can pick his own spot for driving in the first load, either before the fowl reaches him, overhead, or after the duck has passed. I could give the lead for any sort of shot, the lead that works with my swing, but the chances are it would be wrong for the very next man. Judging distance is the great stumbling block of the duck shooter, and it is something that not one man in the hundred thousand will ever learn well enough.

Fred Kimble knew his lead up to eighty yards, and I might add he had an eighty yard gun to test it out with. Not many of us have any such gun and never will have. Kimble's gun was a six bore, carrying an ounce and a half of number 3 shot, backed by six drams of powder. From all evidence it would kill regularly at eighty yards, for the entire load went into a thirty inch circle at forty yards, and the big shot retained both pattern and energy up to the distance. Today we cannot learn to shoot ducks at eighty yards because we have no gun with which to verify our lead. Given a gun which will surely kill when held

right and we can change our lead until we have learned the hold. Once having learned it, it works like black magic, the birds dropping at amazing distances. But if the gun fails us, and as a consequence we change a lead that was right—well—there you are. Nothing more is to be learned with that gun.

Lead is usually taken in lengths of the fowl, not in feet, though of course we can translate into feet. A large duck, pintail, canvasback, mallard, is usually taken at a length of two feet. Teal and bluebills, lesser bluebills, called blackjacks sometimes, are given a length of but one foot in allowing for lead. Kimble's lead, with which doubtless other expert shots would agree, was one length of the bird at forty yards, three lengths at sixty, and six at eighty. My own lead would probably be nearer that of the average duck shooter, and is a length and a half at forty yards, on mallards and pintails, two lengths at fifty yards and three at sixty. Beyond that distance I have never had a gun that was reliable.

Suppose we accept my lead as correct, how do we know the bird is forty yards away or fifty or sixty or more. We do not know unless we have a chance or have had a chance to shoot a lot of ducks. There is no way to learn except to estimate and verify the estimate by hitting until results prove the pudding. Distances are estimated, first by the markings and second by the apparent size of the bird. If, say pintails, are so high or so far away that the drakes cannot be distinguished from the ducks, be sure that they are about out of gun range, not less than fifty yards in a bad light or sixty in a good light. If sex markings are readily distinguished, the white of the breast or on the neck clearly outlined, the bird should be within range and probably is not over forty yards. If the

duck's eyes can be seen, hold at the point of his bill.

Another thing that gives us a line on distance is the apparent size of the fowl. A mallard or pintail within twenty yards of the gun will look his full size, nearly two feet long and with plenty of wing spread. At sixty yards he won't look over a foot long, and a teal will not appear much larger than a quail. Any time large ducks seem small, or they are all of one color, a kind of dark drab, they are far enough away to demand plenty of lead, about one-half more lead than they usually get. Take a pintail when he looks about the size of a whippoorwill, and the man who kills him is a dandy, and I'd like to own his gun. Mallard drakes can be distinguished from the ducks at seventy yards, when high in the air, and if they cannot be so distinguished, pass 'em up. Of course if the bird were near the ground we could distinguish him from the hen bird much farther, a hundred yards off and maybe more. It is the high birds which look small and in which the colors blend. Let me say now that these tall birds are rarely so high as they look at that, and the most startling kills are those made straight over head when the fowl looks to be quite out of gunshot but is not. There is something queer about elevation making objects look small. A man on top of a four hundred foot tower looks like a small child, while the same man four hundred feet distant on the ground appears normal size. Don't give the straight over-head birds so much lead as those flying to one side, and try 'em for luck.

Of course the big ducks and the little fellows, not to mention geese, require close study. Few of us can get over a fixed belief that geese are closer than they really are, and few of us can get it out of our heads that teal are out of range when no more than fifty

yards off. Only the other day I crawled up to what I considered shooting range of a lone goose. I judged that I was within fifty yards or not more than sixty at the outside. I had a ten bore gun loaded with 2 ounces of number 3 shot. The bird saw me indistinctly and I thought him a fool and a dead one, standing up there like a soldier on parade. I knew that if I made him jump he would be another ten yards away before I could shoot, so I took him as he stood. The load never feased him nor the second barrel either. I stepped off the distance and found it to be eighty yards.

The straight overhead and the overhead incomer have always seemed to me to be the easiest shots to acquire. The old instructions were to pull up under the bird, pass him until he was covered and hidden, and pull trigger without stopping the gun. The advice was good, though if a man shoots with both eyes open the bird will not be hidden at any time. Just getting in front of ducks, if they are under forty yards, or not much over a hundred feet high, kills them when I shoot, but if they are upward of forty yards high considerable lead must be given, up to six feet. I have never killed many overhead birds by leading them more than that distance.

If the marksman is pretty safe on his overhead incomers, both birds from the flock should be taken before they reach the gun. Take the first bird twenty yards before he reaches the stand, and the next one can be caught just before he is straight overhead. This turning on ducks to take them from the rear, unless an automatic is used and the gunner is bent on emptying it, is all wrong. I have heard about it being impossible to penetrate the feathers of a duck's breast when he is coming in, but that is sheer nonsense. I have shot at the breast of a large duck when he was

forty-five to fifty yards off, with number 7 shot, the pellets entering the breast and coming out at the back. Men are prolific of excuses when they fail to hit, and the idea that they hit all right but the shot glanced off is one of the simplest. I have been hearing about the breast feathers turning shot for forty years, have been shooting ducks that long, and never lost a duck anywhere close to me from the shot failing to penetrate the breast. I knew one chump who refused to shoot at ducks until they had passed the gun; he didn't kill many at that.

The turning shot is a hard one when the fowls have passed directly overhead. It is practically impossible to swing a gun down, and the bird must be intercepted with a still gun, held low for lead. The higher the duck the lower the hold. If the birds are to one side the rear shot is easier and more deadly, for less lead is required than would be needed for the right angle shot. Even then the lead is liable to be complicated. Ordinarily, where the duck flew steadily onward, the hold would be in front and a trifle low, but very often this is complicated by the bird towering and flaring, as he sees the gun come into action. The hold instead of being low may then have to be high. I have known ducks to flare and wheel away so sharply that the allowance had to be made in what was originally his rear. By knowing the flight habits of the particular species it can sometimes be foretold how much they will tower or flare at sight of the gun, and sometimes they can be caught at the top of a bound without any lead—shooting straight at them and missing about two times in three, I might add. Shooting a duck is something like roping a wise broncho. So long as he is standing still and watching you, he can dodge the rope, but get him to moving so that he can't stop and he is caught.

Shooting passing ducks inside of forty yards is not especially difficult. The man who is content to refuse all shots that are not within easy range can soon get a reputation for being a good duck shot. Lead up to five feet is readily acquired, and the gun can be made to help. An improved cylinder twelve bore will kill a lot of ducks at short range, and it will cover fifty inches at forty yards, thus making amends for a lead that is not very accurate. I have known gunners who would refuse birds that were over thirty yards off, and with an open gun and a lead of anywhere from a foot to three foot, ducks would be killed pretty consistently. The real beauty and the real enticement of waterfowl shooting lies in being able to take the birds up to a full sixty yards.

We are, of course, writing chiefly for the benefit of the beginner; the expert shot is not going to learn anything from a book. Our novice is entitled to take every legitimate advantage. One advantage will lie in the gun, and, as we have seen with other game, he doesn't want a gun which shoots too close. At best he can't take his birds at outside ranges, and close up a modified or even a cylinder bore will be more effective than any full choke. When he is getting most of the fowl under forty yards it is time to think of full choked gun and long range shells. For the first year or two, under present conditions, he will have enough to do to master an open bored gun.

All of us have our limitations, and few Kimbles are being trained in duck shooting today. Half of us are "out-gunned" without knowing it, and three-fourths of the other half know it and can't help it. The writer shot ducks in a day when there were numbers of the fowl and no bag limits, with practically no closed season; he has been at it consistently this many a

year, but was recently outgunned by a big ten bore. His duck gun is a twelve bore, 32-inch barrels, both full choked, shooting into less than a thirty-inch circle at forty yards, with the killing spread, over eighty per cent of the load going into the pattern. He can handle that gun pretty well, and knows his lead under average conditions up to sixty yards. Becoming ambitious to trip his mallard up to eighty yards, he got hold of a heavy ten gauge, and loaded it with 46 grains of De Luxe and two ounces of number 3 shot. Patterns ran about 170 at forty yards, that is a full ounce and a half of shot went into the thirty-inch circle, at good velocity. Trying the arm on sitting birds it was learned that they could be killed away out on the water. Then they were tried awing, and at distances around seventy or eighty yards misses were very consistent. Given enough ducks and enough time, probably he could learn to use that gun, but can't kill any farther with it now than with the twelve, notwithstanding the big gun patterns as many number 3 shot as the twelve does fours. He is outgunned, and ninety-nine duck shooters in the hundred would find themselves in like predicament. The only moral to this story is, procure a gun that you can hit with.

Goose shooting is no different from duck shooting except for the difficulty of judging the distance of the great birds. They fly at about the same rate as ducks, and a like lead will account for one fowl as well as the other. Whether conscious of it or not, the wildfowler is certain to judge distance by apparent size of the mark, and unless trained on geese, will underestimate their distance. All the advice the writer can give is to get the big birds in as close as they will come, and use big shot. Don't let anybody fool you about hitting geese in the head or neck with sevens

and sixes. Certainly that can be done and has been done, but about nine times in ten the birds will be somewhere from forty to eighty yards off. We can't be sure of landing on the head of a goose at forty yards with sixes, for the mark is small and open spaces are in all patterns. Doubting this, try sixes on quail or snipe at forty yards and upward.

Going out for ducks, not very long ago, I put two shells loaded with Bs in my pocket, on the possibility of getting a shot at geese. Two geese passed at pretty long range, a full seventy-five yards, and one was dropped by the use of the two heavy cartridges. The remaining bird refused to leave but circled about, always at long range but still not any farther away than the first goose had been when killed. Four shots were fired at him with number three shot and then he went off about his business. Number 2 shot are the smallest adapted to goose shooting, and I believe that number 1s or Bs are better. For flight shooting geese, the gun must have power and range, neither of which is to be had with fine shot. Decoyed geese are like ducks and can be killed with any sort of a gun, even a twenty-eight bore.

In closing permit me to extend a greeting to all good shooting men. They are all friends of mine, lodge brothers in the great fraternity of men who love the gun, and, yea, with a yet greater love for the wild things that fall to their aim. Good fellows all! Even for the men who shoot decoyed fowl upon the water or who bait birds and then kill them, I can but express the hope that time will show them the error of their ways.

Here is to the mallard. A noble sporting gentleman, king of the wildfowl tribe, without a peer, "the noblest Roman of them all." Beautiful as a bird of paradise,

wise as a crow, wary as a hawk, fast as a falcon, hardy and brave and strong—may his kingdom last forever. Every shooting man could be converted to the religion of the Christian or the Jew if he knew that on the other side he would find the mallard, the ruffed grouse, and the quail.

THE END.

Other Books for Hunters

"Big Game Hunting"

Recreation Outdoor Library, Book 7

By Major Townsend Whelen

Published June 15, 1923—Price, 50 cents

"Gun and Rifle Facts"

Recreation Outdoor Library, Book 8

By Capt. E. C. Crossman

Published June 22, 1923—Price, 50 cents

TABLE OF CONTENTS

From GUN AND RIFLE FACTS
By Capt. E. C. Crossman

THE RIFLE
1. Guns for the Heaviest Game
2. For American Big Game
   Rifles
   Cartridges
   The Choice of a Rifle
3. Rifles for Lesser Game
4. The Small Bore
5. Small Bore Bullseye Punchers
6. For the Small Boy
7. Sights

THE SHOTGUN
1. For Upland Birds
   Types of Guns
   Loads
   Fitting the Gun
2. For "Brother Webfoot"
3. The Trap Gun

THE ONE-HAND GUN
1. For Popping Around
2. For General Purposes
3. For Target Shooting

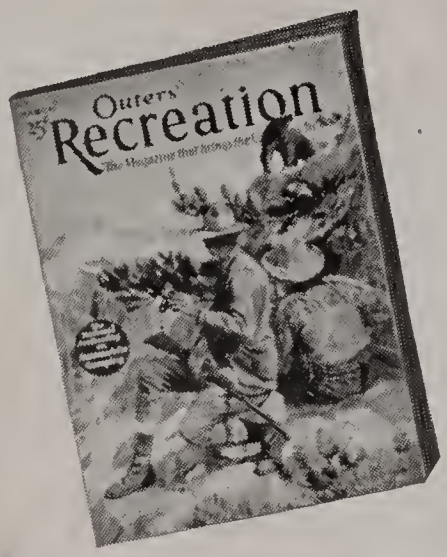
CLEANING YOUR GUN
1. Cause of Rust
2. Solvents and Their Use

Order from Your Sporting Goods Dealer or from

OUTERS'-RECREATION

LIBRARY OF CONGRESS
0 002 886 496 6

Too Good to



Unless you're reading *Outers'-Recreation* regularly, you are missing entertainment and information which would double the pleasure you take in your rod and gun and tent. One issue, exclusive of all illustrations and advertising, contains as much editorial matter as the average outdoor book retailing at $2.50. Practical, progressive, interesting — *Outers'-Recreation* makes good with sportsmen.

A Few Features:

More stories and articles on Angling have been published in *Outers'-Recreation* in the past two years than in any other magazine, without exception.

Hunting stories, and gun and ammunition material from such experts as Maj. Townsend Whelen, Capt. E. C. Crossman and Chas. Askins, are a regular feature.

Outers'-Recreation contains the first department ever devoted by an outdoor magazine to Motor Camping and is recognized as the national authority on that sport.

The "Where-to-Go" Department conducted by Morris Ackerman, well-known sportsman-editor, is unique among magazines for outdoorsmen.

Attractively illustrated, pleasing in appearance from front cover to back, *Outers'-Recreation* is built to interest intelligent, dyed-in-the-wool sportsmen.

High-grade outdoor fiction, humor and special articles combine to make a well-balanced publication which easily converts new readers into regular subscribers.

From Some Recent Letters

You have the only real magazine put out for sportsmen.
—Chas. Brauer, Nebr.

The best outdoor magazine published today — and I have read practically all of them. My beloved wife says it is my bible.
—Leslie B. Guss, Pa.

I have been a constant reader of sporting magazines for ten years. In my opinion, "Recreation" leads all the others.
—Dr. Reid Kellogg, R. I.

I read them all, except one dead one, and yours is nearer 100% in all departments than any of them.
—W. C. Harris, N. Y.

My days would be weary indeed without the breeziest, most interesting and most pleasing-to-the-eye magazine published on the outdoors. —Chas. Reuss, Ind.

Special Offers

1. The next five big 25-cent issues will be mailed to new readers for $1.00, as a trial subscription.
2. The next four issues and any book from the Recreation Outdoor Library will be mailed for $1.00.
3. The next twelve issues and any three books from the Recreation Outdoor Library will be mailed for $3.00.

OUTERS'-RECREATION 500 N. Dearborn Street CHICAGO, ILLINOIS